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Oil and Gas Exploration, Drilling and Production Summary, 1988

Oil and Gas Paper 11

T.R. Carter

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Cover: Aerial Photo of Cable Tool Rigs Drilling Natural Gas Storage Development Wells in the Dawn 167 Pool, Summer 1988.

Photo supplied courtesy of Union Gas Limited

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Oil and Gas Exploration, Drilling and Production Summary, 1988

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Introduction

Information contained within this report has been compiled from records submitted to the Petroleum Resources Section by licensed operators in compliance with the Petroleum Resources Act, R.S.O. 1980. Except where otherwise stated, all statistics and information reported are for the 1988 calendar year.

ACKNOWLEDGEMENTS

This report could not be compiled without the efforts and contributions of all the staff members of the Petroleum Resources Section, particularly the Petroleum Resources Inspectors who are responsible for ensuring the timely and accurate submission of data by industry personnel.

I. Section Organization

The Petroleum Resources Section of the Ontario Ministry of Natural Resources operates under the authority of the Petroleum Resources Act, R.S.O. 1980. The Section enforces the regulations made under the Act, specifically; Regulation 752 - Exploration, Drilling and Production. The Section also administers Regulation 633 - Exploratory Licences and Leases for Oil and Natural Gas North of the Fifty-First Parallel of Latitude, and Regulation 634 - Exploratory Licences and Production Leases for Natural Gas in Lake Erie, both made under the Mining Act. The Section is responsible for all matters related to the disposition of Crown-owned oil and gas rights as well as the regulation of the exploration, development and production activities of the oil, gas, and brine industry in Ontario. The Section employs operational, geological, engineering, inspection, and support staff. In addition to their regulatory functions staff also provide information and advice relevant to oil, gas and brine resources in the province. The Section also maintains a core and drill cuttings sample storage and study facility for use of government staff and the public for subsurface geological research.

Administration and engineering offices are located at 659 Exeter Road, London, Ontario. Key staff in the Petroleum Resources Section in 1988 are shown in Figure 1. Bob Trevail resigned as Chief Geologist at the end of October to take a position with the Consumers' Gas Company Limited. Geological offices and drill cutting and core storage facilities, known as the Petroleum Resources Laboratory, are located in a separate building at the same address. Inspection staff operate from the various Regional and District offices throughout the province as shown in Figure 2.

Administratively the Petroleum Resources Section is part of the Southwestern Region of the Ontario Ministry of Natural Resources, reporting to the Regional Director. Responsibility for policy and legislation is vested in the Fuel Minerals Section of the Land Management Branch, based in Toronto. In 1988 the Manager of the Fuel Minerals Section was Ray Pichette, Senior Policy Advisor was John Fox, and Section Secretary was Margaret Phillip.

1. PETROLEUM RESOURCES LABORATORY

The Petroleum Resources Laboratory is the principal source of information on the subsurface geology of southwestern Ontario, and the only publicly accessible source. Resources and data available include; core and cuttings samples from over 13,000 wells, file information on over 20,000 wells, and the largest single collection of publications and unpublished data on the subsurface geology of southwestern Ontario.

PETROLEUM RESOURCES SECTION
ORGANIZATIONAL CHART
1988

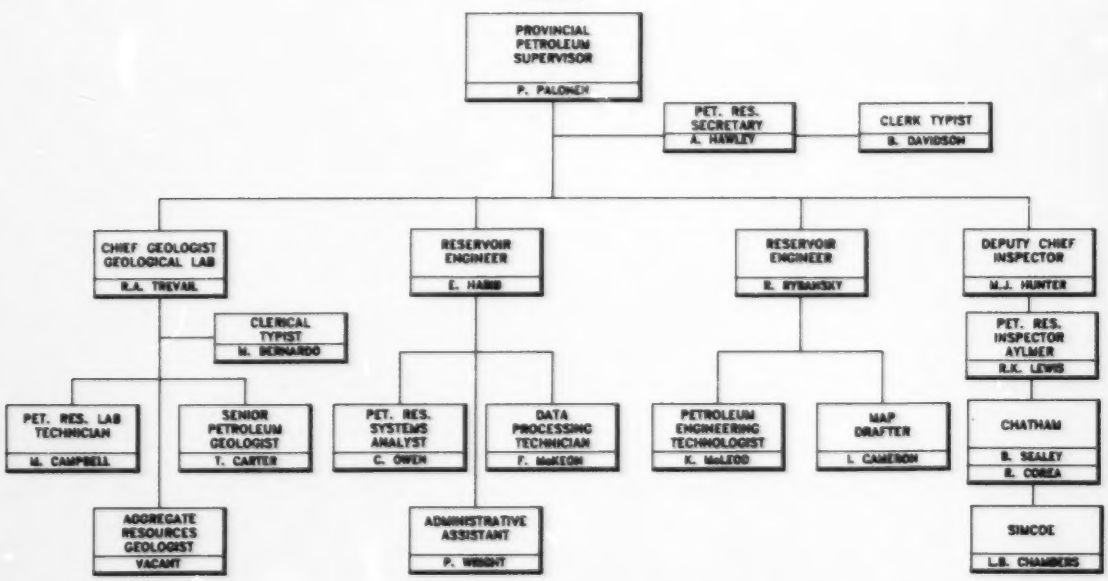

Figure 1. Petroleum Resources Section staff organization, 1988.

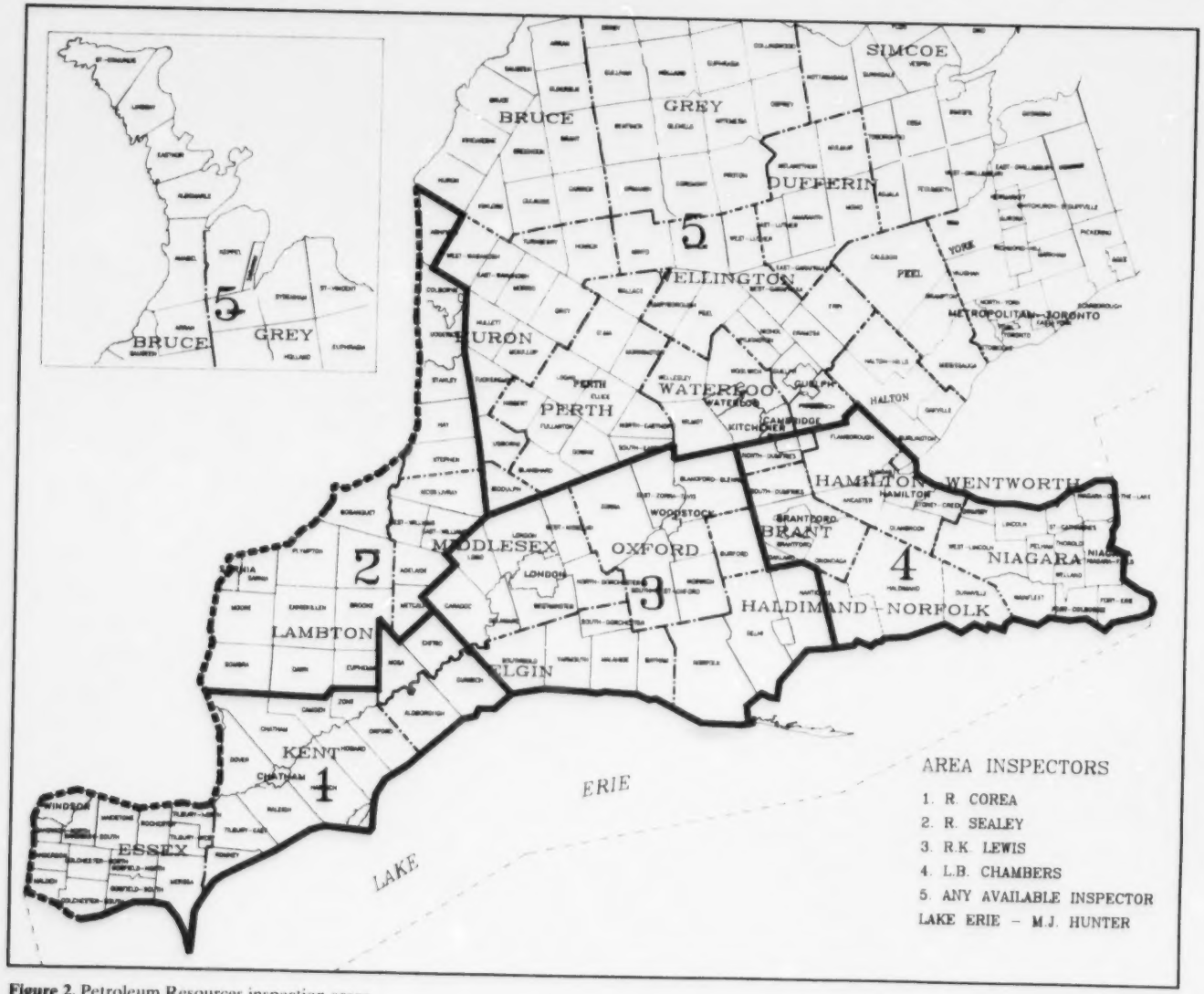

Figure 2. Petroleum Resources inspection areas.

All subsurface geological samples collected from drilling operations in southwestern Ontario are stored at the Lab. Regulation 752 requires that samples from all wells drilled under the authority of the Petroleum Resources Act be collected by the operator and delivered to the Ministry of Natural Resources, under the direction of the area Inspector, as well as information on drilling, well construction, fluids, etc. Samples and related information are processed for permanent storage and maintained for public access.

Cuttings are sorted and washed when they are received from the field. Cores received at the Lab are slabbed using a diamond saw. All cores and cuttings are catalogued and permanently stored for use by the public. Once samples and core have been prepared for examination, formation tops are determined and well cards are prepared showing well locations, elevations of all formation tops, and other technical information.

Work areas for examination of files and samples are available for public use. Use of a petrographic microscope, binocular microscopes and sample examination trays etc. can be arranged with Lab staff depending on availability. There is no charge for these services. A photocopier is also available for public use at a cost of 12.5 cents per copy.

Laboratory resources are utilized by Ministry of Natural Resources geological staff to provide accurate information and interpretations for well classification, spacing regulations, policy and legislation development, and provide data to inspection staff for design and approval of casing programs. Accurate geological information is critical for policy decisions and new legislation affecting the petroleum industry. Geological information supplied by MNR is utilized by numerous other government ministries and agencies, notably the Ontario Geological Survey, the Ontario Energy Board, and the Ministry of Environment.

Accurate and consistent geological data are vital to industry to maximise their exploration success and thus their contribution to energy self-sufficiency for Ontario. Availability of accurate, up-to-date geological data also provides an important incentive for industry to continue to invest in Ontario. Industry geologists from Michigan, Ohio, and Alberta, as well as Ontario, make extensive use of the file data and drill cuttings and core samples stored at the Lab, and geological information provided by geological staff.

The Laboratory is also an important resource centre for public education and academic research on the subsurface geology of southern Ontario. Laboratory facilities and services are extensively utilized by researchers at Ontario universities. Their research activities are supported principally by grants from the provincial Ontario Geoscience Research Grants Program, and the federal Natural Sciences and Engineering Research Council Some projects are funded directly by industry. Lab facilities are also utilized by university geology classes for teaching subsurface geology principles and techniques, and the geology of Ontario.

2. PROGRAM ACTIVITIES

Geological Program

Geological staff continued to collect and interpret geological data, make geological interpretations, prepare statistical summaries, conduct and publish the results of geological research, and make technical presentations. Approximately 600 clients from Ontario, Michigan, Alberta, and Ohio utilized the facilities of the Petroleum Resources Laboratory in 1988, with additional inquiries from Texas, Pennsylvania, Louisiana, New York, and Colorado.

Geological and support staff, with assistance of other Section staff, contributed to or produced several publications on the Ontario oil and gas industry and/or subsurface geology in 1988. These included; summaries of annual oil and gas exploration and development activity in Ontario published in Northeast Oil World, American Association of Petroleum Geologists Bulletin (Carter, T.R., and Campbell, G.R., 1989), Ontario Petroleum Institute newsletter, and Report of Activities 1988 of Resident Geologists published by the Ontario Geological Survey (Carter, 1989). R.A.Trevail presented three technical papers in 1988, two at the Annual meeting of the Geological Association of Canada (Trevail, 1988a, 1988b), and one at the 27th Annual Conference of the Ontario Petroleum Institute (Trevail, 1989).

In addition to the routine collection, processing, and cataloguing of drill cuttings, several important new additions to the core collection were made in 1988. These include the following: Consumers' et al 34345 Romney 13-III - Cobourg Formation to Verulam Formation, PPC 12 Dover 6-IVE - Coboconk Formation, and Cansalt DDH 87-3 Fighting Island - Lucas Formation to Salina E Unit. Several other important cores were received but have not yet been slabbed.

Fifty-two preliminary maps at a scale of 1:100,000 comprising part of phase 5 of the Hydrocarbon Energy Resources Program, the Silurian reef complex report, were released on October 13, 1988, by the Ontario Geological Survey. The maps show the regional structural contours on the top of the Salina A-2 Carbonate Unit, and isopach contours of the top Rochester to top Guelph Formation interval. Pool maps from this report are expected to be ready for release as an open file report by April or May of 1989.

Spacing Unit Applications

In 1987 the Ministry of Natural Resources embarked on a new initiative of stricter enforcement of Section 12, Ontario Regulation 752, requiring applications for the establishment of spacing units to be submitted following the discovery of a pool capable of producing oil or gas. In the past, non-application has resulted in unequal distribution of royalties, poor production practices, and over-drilling of some reservoirs.

In 1988 a total of nine applications for new or revised spacing regulations were processed by Ministry staff. These are listed below with the corresponding Ontario Regulation number.

Dover 7-5-VE: 104/88.

Dawn 2-30-XIV: 248/88

Mersea 2-15-B: 249/88

Mersea 8-16-VIII: 493/88

Romney 6-13-IV: 55/89

Romney 3-8-II: 306/88

Romney 6-13-II: 305/88

Romney 3-8-II: 306/88

Romney 6-13-III (Amended): 54/89

Ontario Energy Board

Staff of the Petroleum Resources Section participated in one formal hearing, E.B.O. 147, which dealt with an application by Tecumseh Gas Storage Limited to designate the Moore 3-21-XII Pool as a natural gas storage area, and to authorize the applicants to inject, store, and withdraw gas from the pool. Section staff were asked by the Board to review the applicants' prefiled evidence, and to provide expert witness testimony at the hearing.

The Moore 3-21-XII gas pool is a Silurian Guelph Formation pinnacle reef which was discovered by Dow Chemical Canada Inc. in 1977. It produced a total of 503.53 million m3 of natural gas from its discovery date until 1986 when it was shut in. The pool straddles the boundary between Moore and Sarnia townships. The land and leases over the portion in Moore Township were owned by Dow at the time of discovery. The land and the natural gas storage rights for the portion in Sarnia Township was owned by the Crown on behalf of the Chippewas of Sarnia Indian Band, and the petroleum and natural gas leases were held by Shell Canada Resources Ltd. In 1981 a voluntary unitization agreement was signed by Dow, Shell, and the Crown on behalf of the Chippewas agreeing to a 78/22% interest for production sharing in favour of Dow. In July, 1987 Tecumseh Gas Storage Limited purchased the gas storage rights and all production assets for the Moore portion of the pool from Dow for $14,175,000. Also in July, 1987 Union Gas Limited acquired the gas storage rights for the Sarnia portion of the pool from the Crown on behalf of the Chippewas for $7.4 million. Tecumseh filed an application to designate the pool for storage on Jan. 27, 1988, and on Mar.31, 1988 signed an agreement with Union Gas agreeing to 78/22% share of ownership of the remaining gas-in-place and of the storage capacity. It was also agreed that Tecumseh would be the storage pool operator.

The hearing took place at the Board offices in Toronto on April 5-7. Union Gas Limited supported the application. R.M. Rybansky and R.A. Trevail of M.N.R. presented evidence on behalf of Board staff, and recommended a change in the proposed boundary of the designated storage area. The change was accepted by the Board and incorporated in the Report to the Lieutenant Governor on May 2, 1988 recommending designation of the pool for storage. The Moore 3-21-XII pool was designated as a natural gas storage area by the Lieutenant Governor in Council by Ontario Regulation 313/88, filed May 13, 1988 and published in the Ontario Gazette on May 28, 1988. The Board released a Decision With Reasons on May 27, 1988, and an Order was issued by the Ontario Energy Board on April 8, 1988 authorizing the injection, storage, and withdrawal of gas from the designated storage area, and giving leave for the construction of a pipeline to the storage area.

II. 1988 Exploration and Development Highlights

Activity in Ontario was at its highest level since 1980, with drilling completed at a total of 194 wells for an aggregate length of over 109,000 metres, nearly double the activity recorded for 1987. This increase is due to a number of factors; a resumption of drilling on Lake Erie by Pembina Exploration Company and The Consumers' Gas Company, an increase in exploration for Silurian reefs, a major development drilling program in the (Devonian) Rodney oil pool, development of the newly designated Moore 3-21-XII natural gas storage pool, and a significant increase in the number of wells drilled to test Ordovician targets. Forty percent of the exploratory wells and sixty-nine percent of the development wells drilled in 1988 were successfully completed as oil or gas producers. Exploratory wells completed as producers are listed in Table 1 and located on Figure 3. Table 2 lists results of other wells considered to have significant exploration interest or which contributed important new stratigraphic information.

Activity was paced by a record amount of drilling of Ordovician targets, as interest in this very successful play continued to increase. Drilling of Ordovician targets was completed at 25 exploratory wells, 15 development wells, and 2 stratigraphic tests, compared to 20 wells in all of 1987. The exploratory drilling resulted in 10 oil producers and 2 gas producers, while the development drilling resulted in 11 oil producers and 1 gas producer. Oil production in Ontario increased dramatically in 1988, due entirely to production from new Ordovician reservoirs discovered since 1983. Production totalled approximately 190,570 m3 (1.2 million bbl) compared to 135,635 m3 (853,000 bbl) in 1987. Further production increases are expected in 1989.

The highlights of the Ordovician play in 1988 were the discovery of three new oil pools and one natural gas pool in Ordovician strata. The most significant of these was the discovery of the Romney 6-13-IV oil pool, referred to by the operator as the Renwick North pool. The pool is located immediately north of the Romney 6-13-III pool which was discovered in 1987. The discovery well, Consumers et al 34347 Romney 6-13-IV, reached total depth of 851.0 metres on May 30, 1988 in the Verulam Formation, and was completed for production in a perforated interval from 830.0 to 840.0 metres kB in the Cobourg and Verulam formations. The well was placed on production in August and produced 5,901.5 m3 of oil in 1988. One development well was completed as an oil producer in this pool in 1988 and an extension of the pool to the east was discovered by Cons et al 34352 Romney 2-15-III in December of 1988. Another new Ordovician oil pool was discovered in Romney Township by Cons et al 34427 Romney 5-15-I and extensions to the Romney 6-13-III oil pool were discovered by Cons et al 34344 Romney 3-14-II and Cons et al 34346 Romney 1-12-III. Three development wells were also successfully completed as oil producers in the Romney 6-13-III pool in 1988.

In Mersea Township Ram/BP Mersea 8-16-VIII was successfully completed as an oil producer on an extension of the structure that hosts the Mersea 6-23-VII pool. Two development wells were successfully completed as oil producers in this pool in 1988. A new Ordovician natural gas pool was discovered by Ram/BP 4 Raleigh 2-14-XIV in an area previously untested for Ordovician potential. The well reached total depth of 1208.0 metres kB in the Precambrian on August 4, 1988, and was completed for production in a perforated interval from 921.0 to 927.5 metres kB in the Cobourg Formation. The well is reported to be capable of production of 4.6 thousand m3/day of natural gas at an initial shut-in pressure of 4805 kPa. In Dover Township 4 wells were completed as oil producers and 1 as a gas producer in exploratory extensions of the Dover 7-5-V E oil and gas pool. All four oil wells were completed within dolomitized limestones in the Black River Group, while the gas well was completed in the Cobourg Formation at the top of the Trenton Group.

Two Cambrian exploratory wells were successfully completed as oil producers in 1988. Judo Dunwich 8-22-BF-A was completed as an oil producer in a test of a small fault block between the Willey and North Willey pools. O.K. West No.2 - W.Newman No.2 Gosfield North 5-13-IX was re-entered and was successfully completed as an oil producer in the Cambrian. One other Cambrian exploratory test, North Hawk Southwold 8-27-STRNB, was initially reported to be a potential gas producer in a previously untested area, but was eventually plugged and abandoned. A new Cambrian gas pool was discovered by Ram/BP 5 Raleigh 1-17-XIII, in an area which has been only sparsely tested for its Cambrian potential. The well was targeted on Ordovician strata but encountered natural gas in the Cambrian while being drilled to total depth in the Precambrian. The well was perforated for production from 1155.5 to 1157.5 metres kB with an initial reported potential of 26.5 thousand m3/day with a shut-in pressure of 11960 kPa.

There was an encouraging number of new pool discoveries in Silurian carbonate strata in Ontario in 1988. The most significant was a Guelph Formation incipient reef discovered by Raen Smith et al Sombra 4-16-IX west of the Terminus pinnacle reef. The well was drilled to TD on October 12, 1988 and was completed as a gas producer in an open hole interval from 591.8 to 598.0 metres kB in the Guelph Formation. Initial potential is reported to be 23.37 thousand

TABLE 1: SUCCESSFUL EXPLORATORY WELLS IN SOUTHWESTERN ONTARIO IN 1988

MAP NO.	LATITUDE LONGITUDE	WELL NAME	PRODUCING FORMATION	METRES DRILLED	CLASS STATUS	TD DATE
ELGIN COUNTY						
1	42° 45'32" 81° 31'30"	Judo Dunwich 8-22-BF-A	Cambrian	1084.0	NPW OPGS	88.04.28
ESSEX COUNTY						
2	42° 08'37" 82° 43'38"	O.K. West No.2-W. Newman No.2 Gosfield North 5-13-IX	Cambrian	0.0	DPT OPGS	88.08.26
3	42° 07'21" 82° 31'23.5"	Ram/B.P. 2 Mersea 8-16-VIII	Cobourg	1077.0	NPW OPGS	88.02.24
HURON COUNTY						
4	43° 19'53.5" 81° 40'35"	Pamax et al Stephen 2-23-XVI	Guelph	576.1	NPW GP-SUS	88.04.23
KENT COUNTY						
5	42° 21'51" 82° 21'30"	PPC/Ram 13 Dover 3-3-IV E	Coboconk	1106.0	NPW OP	88.05.21
6	42° 22'16" 82° 20'30.5"	PPC et al 15 Dover 5-5-IV E	Coboconk, Gull River	1067.0	NPW OPGS	88.02.23
7	42° 22'04.5" 82° 20'38"	PPC 16 Dover 7-5-IV E	Coboconk, Gull River	1070.0	NPW OPGS	88.01.19
8	42° 22'21" 82° 20'12"	PPC 12 Dover 6-6-IV E	Coboconk	1081.4	NPW OP	88.03.10
9	42° 22'10" 82° 19'27"	PPC/Ram 20 Dover 3-7-III E	Cobourg	1157.0	NPW GP	88.06.10
10	42° 16'17" 82° 06'01"	Ram/B.P. 4 Raleigh 2-14-XIV	Cobourg	1208.0	NPW GP	88.08.04
11	42° 16'17" 82° 08'01"	Ram/B.P. 5 Raleigh 1-17-XIII	Cambrian	1186.0	NPW GPOS-SUS	88.08.20
12	42° 08'05" 82° 26'24"	Consumers' et al 34346 Romney 1-12-III	Cobourg, Verulam	1101.0	NPW OP	88.06.12
13	42° 08'12" 82° 26'26"	Consumers' et al 34347 Romney 6-13-IV	Cobourg, Verulam	851.0	NPW OPGS	88.05.30
14	42° 07'44" 82° 24'54"	Consumers' et al 34344 Romney 3-14-II	Cobourg, Verulam	1071.0	NPW OPGS	88.05.11
15	42° 07'23" 82° 23'43"	Consumers' et al 34427 Romney 5-15-I	Cobourg, Verulam	1120.0	NPW OPGS	88.11.19
16	42° 08'41" 82° 25'29"	Consumers' et al 34352 Romney 2-15-III	Kirkfield	1111.0	NPW OP	88.12.03
LAKE ERIE						
17	42° 33'58" 80° 14'57"	Place Long Point 91-F-2	Grimsby	419.1	NPW GP	88.08.03
LAMBTON COUNTY						
18	42° 46'48" 82° 05'17"	Perma Enniskillen 2-21-II	A-1 Carbonate	603.2	NPW GP	88.03.16
19	42° 50'50" 82° 20'24"	Capricorn Moore 2-14-VII	Guelph	719.3	NPW OPGS-SUS	88.02.23
20	42° 43'22.5" 82° 23'00"	Hadley-Midway Sombra 5-11-XII	Guelph	672.4	NPW GP	88.06.21
21	42° 41'08" 82° 20'55"	Raen Smith et al Sombra 4-16-IX	Guelph	598.0	NPW GP	88.10.12
NORFOLK COUNTY						
22	42° 45'03.5" 80° 18'59.5"	Metalore 76 Charlotteville 7-20-III	Thorold, Grimsby	403.6	NPW GP	88.08.13
23	42° 38'36" 80° 40'27"	Hemlock 12 Houghton 8-4-II	Thorold, Grimsby	449.6	NPW GP	88.08.23
24	42° 43'36.5" 80° 31'45"	Bayview 16 North Walsingham 3-17-IX	Thorold, Grimsby	378.3	NPW GP	88.05.12
WELLAND COUNTY						
25	42° 54'53" 79° 22'00"	Champlain Wainfleet 6-17-III	Grimsby	233.2	NPW GP	88.10.28
WENTWORTH COUNTY						
26	43° 09'48" 79° 56'34"	Mary Ellen Binbrook 8-1-V	Irondequoit	121.9	NPW GP	88.09.27
27	43° 08'24" 79° 51'08"	Reid 1 Glanford 2-15-V	Whirlpool	137.2	NPW GP	88.10.12

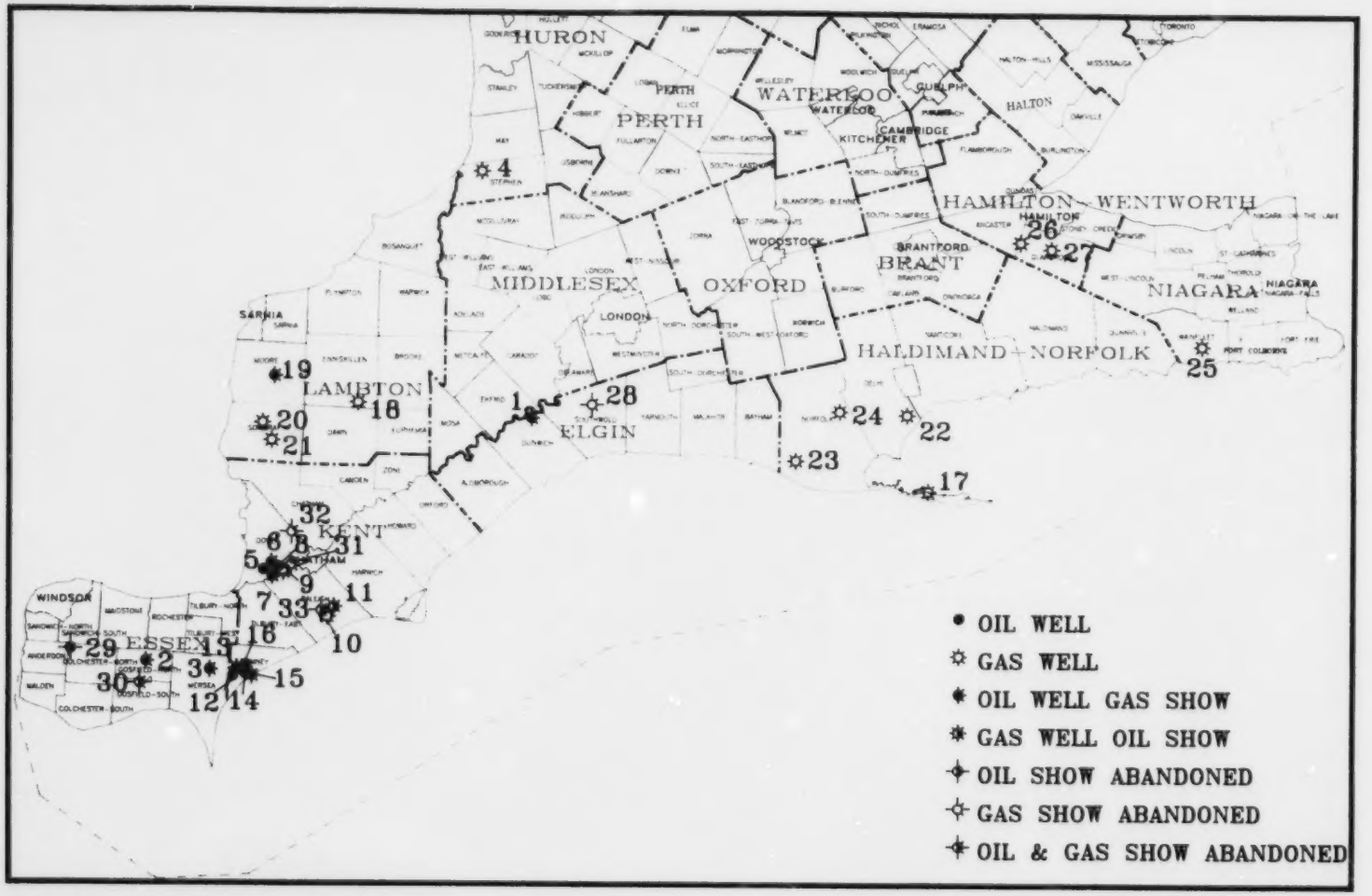

Figure 3. Discoveries and important dry tests in southwestern Ontario in 1988.

TABLE 2: IMPORTANT DRY TESTS IN 1988.

MAP NO.	LATITUDE LONGITUDE	WELL NAME	FORMATION SHOWING OIL OR GAS	METRES DRILLED	CLASS STATUS	COMPL. DATE
ELGIN COUNTY						
28	42° 45'43" 81° 17'43"	North Hawk Southwold 8-27-STRNB	Cambrian	1083.6	NPW GS-ABD	88.10.13
ESSEX						
29	42°14'58.5" 82° 57'42"	Cons 34310 Colchester N. 8-1-XIII	Trenton-Black R. Black River	1065.6	NPW OS-ABD	88.09.05
30	42° 14'58.5" 82° 43'59"	Cons 34333 Gosfield S. 8-12-V	Verulam Kirkfield	1057.0	NPW OSGS-ABD	88.02.08
KENT						
31	42° 23'53" 82° 16'53"	PPC 11 Dover 4-14-III E	Kirkfield	1182.2 GS-ABD	NPW	88.02.06
32	42° 23'03" 82° 15'58"	Francisco-Pinetree Dover 4-24-VII E	Gull River	1177.8	NPW GS-ABD	88.05.25
33	42°16'45" 82° 08'30"	Ram BP #8 Raleigh 3-14-XIII Black River	Trenton	1203.0	NPW OSGS-ABD	88.11.08

m3/day of natural gas at an initial shut-in pressure of 6481 kPa. Capricorn Moore 2-14-VII reached total depth of 719.3 metres kB in the Guelph Formation on Feb. 23, 1988 and was completed as an open hole oil producer over the interval 713.5 to 719.3 metres kB within a Guelph Formation incipient reef. The well is currently suspended. Hadley-Midway Sombra 5-11-XII was completed as a gas producer in another Guelph Formation incipient reef located between the Bickford and Wilkesport pinnacle reefs. Initial potential for the well is reported to be 12.2 thousand m3/day with an initial shut-in pressure of 6570 kPa, in an interval from 645.0 to 655.9 metres kB. Perma Enniskillen 2-21-II was also a successful Silurian carbonate exploratory test. It was drilled to TD on March 16, 1988 and was completed as a gas producer in a dolomitized zone in the A-1 Carbonate Formation just west of the Oil Springs East pinnacle reef. Initial potential was reported to be 3.91 thousand m3/day of natural gas at an initial shut-in pressure of 6033 kPa. An extension of the Dashwood pinnacle reef in Huron County was discovered by Pamax et al Stephen 2-23-XVI. The well was completed as a gas producer over an open hole interval from 549.4 to 552.2 metres kB at an initial reported rate of 8.5 thousand m3/day.

Several Clinton-Cataract exploratory wells were successfully completed as gas producers in Norfolk, Welland, and Wentworth counties, and one well on Lake Erie. All of these wells are in extensions of large regional gas reservoirs in Lower Silurian sandstones.

A major infill drilling program was completed by the Lakewood IV Limited Partnership in the Rodney oil pool in Aldborough Township, Elgin County. All 15 wells were completed as oil producers. The program was designed to help recover remaining oil reserves in this large Devonian pool. This pool has produced over 1.5 million m3 of oil since its discovery in 1949.

Development of the Moore 3-21-XII natural gas pool for natural gas storage began in 1988 shortly after its designation as a natural gas storage area by the Ontario Energy Board. Eleven natural gas storage and one observation well were drilled in this pool in 1988. The pool was the largest remaining undeveloped (for storage) pinnacle reef in Ontario, with a reservoir volume of approximately 572 million m3 (20.2 Bcf) at discovery pressure. None of the remaining undeveloped pinnacle reefs exceeds 200 million m3 (7 Bcf) in volume.

Energy Mines and Resources Canada announced the phase-down of the Canadian Exploration and Development Incentive Program (CEDIP) with a reduction in the incentive rate to 16.67% effective October 1, 1988 from the original 33.33%. The program was created to stimulate oil and gas development in Canada.

The experimental horizontal oil-drainage project operated by Devran Petroleum of London, Ontario, and Shell Canada Resources in the abandoned Devonian Sarnia-London Road oil pool was abandoned in 1988. The operators were unable to overcome problems caused by excessive production of formation water at the project. The company has not yet released a final report on the results of the project.

Ram Petroleums entered into an agreement with BP Canada Incorporated in 1988 under which BP purchased $500,000 of Ontario seismic data and committed to spend $2 million in 1988 on Ram's undeveloped oil and gas leases in Essex County and a portion of Kent County. In exchange BP would earn a 16 2/3 percent interest in approximately 25,500 hectares of leases. BP had an option to earn an additional 16 2/3 in the lease in each of 1989 and 1990 by making yearly expenditures of $2.2 million.

III. Leasing

1. LICENCES

The number of licences to lease oil and gas rights in Ontario issued in 1988 decreased marginally to a total of 159, compared to 160 issued in 1987 (Table I-1).

2. ACTIVITY

A. Onshore - Southwestern Ontario

With only a few exceptions mineral rights in onshore portions of southwestern Ontario are held by the surface rights owner. Exploration companies must negotiate a lease on the oil and gas rights with the landowner in order to conduct exploration and/or produce oil and gas. The Province of Ontario does not collect royalties on production from freehold lands in the province, and at the present time there is no production from Crown land in onshore areas.

In 1988, 66,606.3 hectares of oil and gas rights were acquired on land in Ontario, an increase of 32% from the previous year (Table 3). The figures in Table 3 represent only new hectares leased on freehold lands, and therefore do not reflect the total number of hectares under lease and do not include assignments. Most of the increase was due to a large increase in the area leased in Kent County, reflecting the interest in exploration for Ordovician reservoirs in that county.

B. Offshore - Lake Erie

The Petroleum Resources Section, under the authority of Ontario Regulation 634 of the Mining Act, administers the disposition of Licences of Occupation and Production Leases in transactions involving Crown land in Lake Erie. By international agreement, drilling is restricted to the portion of Lake Erie east of a line taken from Point Pelee, Ontario to Marble Head, Ohio. As well, production from the other parts of the lake is limited to natural gas.

Approximately 1.1 million hectares (2.7 million acres) are available for exploration on Lake Erie. Table 4 shows the number of hectares under disposition during the period 1963-1988. In 1988, 236,897.9 hectares

TABLE 3: HECTARES LEASED ONSHORE, 1982 TO 1988.

County	1982	1983	1984	1985	1986	1987	1988
Brant	388.5	—	—	—	—	—	—
Bruce	1018.2	—	485.6	87.4	—	—	4079.6
Durham	—	54.2	60.7	—	—	—	—
Elgin	3258.3	19273.9	17739.2	5676.4	996.3	2894.7	3206.7
Essex	4139.7	5310.8	5369.4	41231.2	31900.9	11523.2	9101.8
Grey	—	809.4	—	—	—	—	—
Haldimand	235.5	—	260.6	—	—	—	—
Halton	—	—	—	0.2	0.2	0.2	0.2
Huron	5739.5	12101.7	1999.3	1539.0	2194.8	4895.1	7507.6
Kent	13696.8	7739.0	24649.3	703.3	13738.7	9166.9	27966.4
Lambton	22249.7	28001.7	21926.6	19464.6	10158.1	12832.3	11782.5
Lincoln	4.0	40.5	—	—	—	0.8	—
Manitoulin Island	60.7	288.5	—	—	—	—	40.5
Middlesex	1418.0	2251.6	3313.8	7281.3	1080.3	5524.2	2049.7
Norfolk	3976.8	1660.8	2107.9	4439.8	1890.7	1975.5	515.6
Oxford	357.7	141.6	111.5	519.6	20.2	168.8	267.5
Perth	—	—	—	—	—	—	—
Victoria	—	—	—	—	—	—	—
Welland	183.7	4.0	389.3	4.1	.1	4.0	61.1
Wellington	184.5	517.6	—	—	—	—	—
Wentworth	—	—	—	—	—	—	27.1
TOTAL	56911.6	78194.3	78413.2	88947.0	61984.4	0298.1	66606.3

TABLE 4: LAKE ERIE HECTARES UNDER DISPOSITION 1963-1988.

YEAR	LICENCES OF OCCUPATION	PRODUCTION LEASES	TOTAL HECTARES	YEAR	LICENCES OF OCCUPATION	PRODUCTION LEASES	TOTAL HECTARES
1963	n/a	n/a	466247.6	1976	1019282.2	74256.5	1093538.7
1964	n/a	n/a	n/a	1977	999396.0	94132.8	1093538.7
1965	n/a	n/a	n/a	1978	961746.0	157274.3	1119020.3
1966	n/a	n/a	259493.1	1979	887280.9	212918.7	1100199.6
1967	n/a	n/a	1257782.2	1980	889578.0	215002.0	1104580.0
1968	n/a	n/a	1257631.3	1981	667110.0	279529.0	946639.0
1969	n/a	n/a	1256819.5	1982	843068.0	01109.0	1144177.0
1970	n/a	n/a	828671.8	1983	471416.0	294022.0	770438.0
1971	n/a	n/a	656906.1	1984	766823.9	301229.3	068053.2
1972	594437.6	62236.3	656673.9	1985	730731.3	308621.8	1039353.1
1973	962821.6	64503.8	1027352.4	1986	345785.6	346870.5	692656.1
1974	1011015.2	71206.1	1082221.3	1987	268539.1	351069.5	619617.9
1975	1021269.2	74256.5	1093538.7	1988	236897.9	352344.4	589242.3

were held under Licences of Occupation, and 352,344.4 hectares were held under Production Leases, for a total of 589,242.3 hectares. This is a decline of 5% from the previous year and reflects decreased exploration interest in Lake Erie. Approximately 510,000 ha were available for disposition at year end.

Rental payments to the Crown in 1988 were $87,804.99 for Licences of Occupation and $580,901.44 for Production Leases. The total, $668,786.43, represented a decrease of 2% from rent collected in 1987. Royalty payments received by the Crown for the year amounted to $2,937,919.63, representing a 21% decrease from the $3,718,508.10 collected in 1987.

Total revenue for all royalties and rent for the year was $3,606,706.00 compared to $4,400,600.63 collected in 1987.

C. Hudson and James Bay Lowlands

Administration of licensing and leasing of oil and gas rights on Crown land in the Hudson and James Bay Lowlands is performed by the Petroleum Resources Section and personnel of Moosonee District, Ministry of Natural Resources, under Regulation 603, R.S.O. 1970. This statute regulates Licences of Occupation on Crown lands north of the fifty-first parallel of latitude.

All licences and leases previously held in this area have expired. No new licences or leases were issued in 1988.

IV. Geophysical and Geochemical Activity

1. LICENCES

Forty-nine licences to conduct geophysical or geochemical exploration for oil and natural gas in Ontario were issued in 1988 (Table I-2).

2. ACTIVITY

Geochemical exploration in Ontario in 1988 declined for the second year in a row (Table 5), due principally to fewer water well sampling programs completed by B.G. Environmental Surveys Ltd. The projects completed in 1988 were centred in Wellington, Waterloo, Perth, and Grey Counties, whereas in the previous years activity has been concentrated in counties to the south and west of London.

A total of 90 seismic surveys were completed in Ontario in 1988, for a total of 1065.2 kilometres, compared to 60 programs totalling 1146.3 kilometres in 1987. Nineteen programs totalling 281.2 km using dynamite as the energy source were completed in 1987, all of which used Cangeo Ltd as the contractor. The remainder of the programs utilized airguns, with Ecoseis Exploration Ltd acting as the contractor.

Most of the seismic data was acquired in support of exploration directed at Ordovician targets, principally in Essex and Kent Counties. Forty-two surveys totalling 503.5 km were completed in Kent County. Twenty-fivesurveys totalling 399.2 km were completed in Essex County. Fourteen seismic programs

TABLE 5: GEOPHYSICAL AND GEOCHEMICAL EXPLORATION, 1984-1988.

METHOD	COUNTY	1984		1985		1986		1987		1988	
		km	+ ha	km	+ ha	km	+ ha	km	+ ha	km	+ ha
GEOCHEMICAL											
	Brant	—	18716	—	—	—	1300	—	—	—	—
	Bruce	—	—	—	—	—	—	—	116900	—	11500
	Elgin	396.0	56608	—	42325	—	59800	—	—	—	—
	Essex	256.9	—	—	169661	—	167600	—	—	—	—
	Grey	—	—	—	—	—	—	—	—	—	60000
	Halton	—	—	—	—	—	2000	—	—	—	—
	Hamilton-Wentworth	—	—	—	—	—	33600	—	—	—	—
	Huron								259200	—	6100
	Huron-Bruce	—	—	850.0	—	—	65000	—	—	—	—
	Kent	107.7	—	—	177158	—	216000	—	—	—	—
	Lambton	233.8	—	278.6	276248	—	132800	17.6	—	—	—
	Middlesex	290.1	92226	—	150122	—	221400	—	—	—	1010
	Norfolk	—	39803	—	—	—	—	—	—	—	—
	Oxford	290.0	58914	—	113789	—	117800	—	—	—	—
	Perth	—	—	—	—	—	116900	—	77300	—	36900
	Waterloo	—	—	—	—	—	80600	—	1700	—	51500
	Wellington	—	—	—	—	—	20900	—	9200	—	143400
Total		1574.5	266267	1128.6	929303	—	1235700	17.6	464300	—	310410
GRAVITY											
	Lambton	—	—	—	—	—	—	140.6	—	—	—
	Middlesex	—	—	—	—	—	—	123.0	—	—	—
Total		—	—	—	—	—	—	263.6	—	—	—
RADIOMETRIC											
	Kent	—	—	50.0	—	—	—	—	—	—	—
	Lambton	—	—	—	—	81.7	—	—	—	—	—
Total		—	—	50.0	—	81.7	—	—	—	—	—
SEISMIC											
	Elgin	90.1	—	101.2	—	50.0	—	15.3	—	43.9	—
	Essex	55.1	—	664.8	—	222.3	—	535.4	—	399.2	—
	Huron	—	—	—	—	4.8	—	11.1	—	21.0	—
	Kent	74.0	—	66.5	—	118.3	—	432.2	—	503.5	—
	Lake Erie	372.0	—	—	—	—	—	—	—	—	—
	Lambton	91.9	—	131.3	—	21.7	—	128.5	580	65.8	652
	Middlesex	4.3	—	12.6	—	—	—	7.9	—	11.5	—
	Norfolk	1.0	—	—	—	—	—	—	—	—	—
	Oxford	—	—	—	—	—	—	15.9	—	20.4	—
Total		688.8	—	976.4	—	417.1	—	1146.3	—	1065.2	652
CSAMT											
	Essex	—	—	—	—	—	—	6.6	—	8.2	—
	Lambton	—	—	—	—	—	—	4.0	—	—	—
Total		—	—	—	—	—	—	10.6	—	8.2	—
TOTAL		2263.3	266267	2189.0	929303	498.8	1235700	1438.1	464880	1073.4	311062

totalling 65.8 km were completed in Lambton County, most of which were probably directed at Silurian pinnacle reef targets. Two 3D seismic surveys were completed by Union Gas Ltd. in 1988. One program was over the Enniskillen 28 natural gas storage pool in Enniskillen and Moore Township, and the other was over the Sombra natural gas storage pool. Both these storage pools utilize depleted pinnacle reefs. The surveys were intended to serve as a guides to establishing drilling locations for new storage wells needed to complete development of these pools for storage.

V. Drilling

1. LICENCES

Licences were issued to owners of 69 machines for boring, drilling, or plugging wells in 1988 (Table I-3).

2. PERMITS

A total of 221 drilling permits were issued in 1988, compared to 108 in 1987.

3. ACTIVITY

A total of 194 wells were drilled in Ontario in 1988 for a combined drilled length of 109,377.9 metres (Table 6). This is nearly double the activity level recorded for 1987, and is comparable to levels recorded for 1985 and the immediately preceding years when an average of 200 wells were drilled in Ontario each year. A total of 65 exploratory wells and 80 development wells were drilled in 1988 compared to 45 exploratory and 33 development wells in 1987. Forty percent of the exploratory wells and 69% of the development wells were successfully completed as oil or gas producers.

There was a large increase in drilling in Lake Erie due to the completion of major development programs by Pembina Exploration Company and The Consumers' Gas Company (Table 7, Figure 4). Eight wells were drilled by The Consumers' Gas Company; five development wells targeted on Middle Silurian Guelph Formation patch reefs, and two development and one exploratory well targeted on Lower Silurian sandstones of the Clinton-Cataract Groups. Four of the reef tests were successfully completed as gas producers in the Guelph Formation and associated dolomitized limestones of the overlying A-1 and A-2 Carbonate Units of the Salina Group. All three of the Clinton-Cataract wells were plugged and abandoned. Twenty-three wells were drilled by Pembina on Lake Erie in 1988, all of which were targeted on Clinton-Cataract sandstones. Three of these wells were exploratory tests, all of which were plugged and abandoned. Twelve of the development wells were completed as gas producers in either the Grimsby or Whirlpool Formation sandstones. Two exploratory wells were drilled by Place Resources in 1988, resulting in one gas producer in the Grimsby Formation.

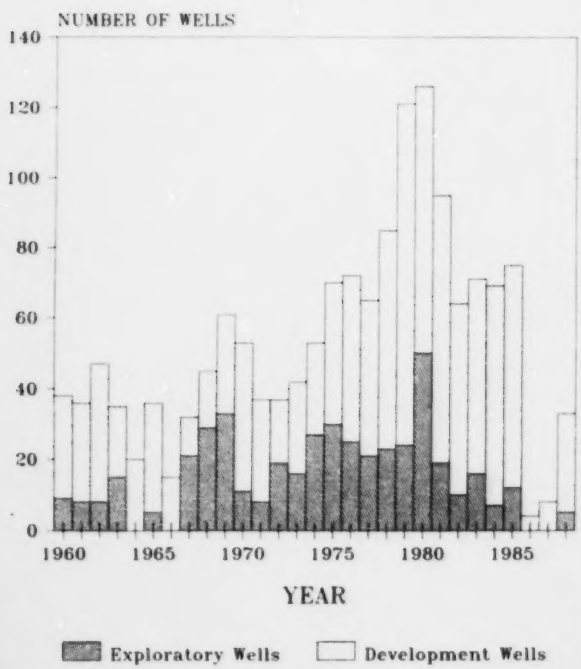

Figure 4. Exploratory and development wells drilled annually in Lake Erie, 1960-1988.

The growing interest in the very successful Ordovician oil play continued to be the highlight of drilling activity in Ontario. Drilling of Ordovician targets increased significantly with drilling reported to be complete at 25 exploratory wells, 15 development wells, and 2 stratigraphic tests, compared to 20 wells in all of 1987. The exploratory drilling is reported to have resulted in 10 oil producers and 2 gas producers, while the development drilling resulted in 11 oil producers and 1 gas producer. The focus of this activity was in Essex and Kent Counties, particularly in Mersea Township and Romney Township east of the Hillman pool, and Dover Township near the Dover 7-5-V E pool. In Romney Township five exploratory and six development wells were successfully completed as oil producers, with only two wells resulting in dry holes. In Dover Township four exploratory wells were completed as oil producers, one as a gas producer, and three wells were dry holes. Two development wells in Dover Township resulted in one oil producer and one gas producer. In Mersea Township one exploratory well and 3 development wells were completed as oil producers, with one unsuccessful development well. Ordovician tests were also drilled in Raleigh and Chatham Townships in Kent County, Colchester North, Colchester South, and Gosfield South Townships in Essex County, Sombra Township in Lambton County, and Stanley Township in Huron County, as operators began to broaden the play beyond its current centres in Romney, Mersea, and Dover Townships. One exploratory well in Raleigh Township was completed as a gas producer, and one development well in Colchester South Township was reported to be an oil producer. The remaining wells were all unsuccessful.

Five exploratory wells and 3 development wells were drilled to test Cambrian sandstone targets in 1988.

TABLE 6: SUMMARY OF DRILLING IN 1988.

COUNTY	TOWNSHIP	EXPLORATORY						DEVELOPMENT						SERVICE		TOTAL	
		GAS	OIL	DRY	SUSP	TOTAL WELLS	TOTAL METRES	GAS	OIL	DRY	SUSP	TOTAL WELLS	TOTAL METRES	TOTAL WELLS	TOTAL METRES	WELLS	METRES
	Aldborough								15	6		21	2226.5	1	0.0	22	2226.5
Elgin	Dunwich		1			1	1084.0									1	1084.0
	Southwold			1			1083.6									1	1083.6
	Anderdon													1	372.5	1	372.5
Essex	Colchester N.			1		1	1065.6									1	1065.6
	Colchester S.								1			1	655.9			1	655.9
	Gosfield N.		1			1	0.0									1	0.0
	Gosfield S.			3		3	3068.4									3	3068.4
	Mersea		1			1	1077.0		3	1		4	3852.5			5	4929.5
	Tilbury N			1		1	535.0									1	535.0
Haldimand	Canborough							1				1	174.6			1	174.6
	Dunn							1				1	259.1			1	259.1
	Oneida							1				1	185.9			1	185.9
Huron	Hay							1				1	615.0			1	615.0
	Stanley			2		2	1686.7	1								2	1686.7
	Stephen	1				1	576.1									1	576.1
Kent	Camden							1		1		2	943.0			2	943.0
	Chatham			1		1	1202.1									2	1202.1
	Dover	1	4	3		8	9025.9	1	1			2	2237.4	1	190.0	11	11453.3
	Harwich			1		1	165.7									1	165.7
	Howard													1	382.2	1	382.2
	Raleigh	2		2		4	4783.0									4	4783.0
	Romney		5			5	5254.0			6	2	8	7798.7			13	13052.7
	Zone													1	201.2	1	201.2
Lambton	Dawn			5		5	3050.6							8	4160.1	13	7210.7
	Enniskillen	1		2		3	1954.8			1		1	143.0	14	4333.5	17	6431.3
	Moore		1	2		3	2187.2							18	12181.7	21	14368.9
	Plympton			1		1	784.3									1	784.3
	Sombra	2		6		8	5352.3				1	1	609.6	1	590.0	10	6551.9
	Warwick													1	12.3	1	12.3
Middlesex	Ekfrid			1		1	1140.0									1	1140.0
	McGillivray			1		1	513.0									1	513.0
	N. Dorchester			1		1	1083.0									1	1083.0
Norfolk	Charlotteville	1				1	403.6									1	403.6
	Houghton	1				1	449.6									1	449.6
	N. Walsingham	1				1	378.3									3	1169.8
	Townsend							2				2	791.5			1	304.8
Oxford	Blandford							1				1	304.8			3	2683.3
	Blenheim							2			1	3	2683.3			1	891.2
Prince Edw	Prince Edward										1	1	891.2	2	63.5	2	63.5
Welland	Wainfleet	1				1	233.2	1								2	445.0
Wentworth	Binbrook	1				1	121.9					1	211.8			1	121.9
	Glanford	1				1	137.2									1	137.2
SUBTOTALS		13	13	34		60	48396.1	12	27	13		52	24583.8	49	22487.0	161	95466.9
Lake Erie		1		4		5	2173.8	16		12		28	11737.2			33	13911.0
TOTAL		14	13	38		65	50569.9	28	27	25		80	36321.0	49	22487.0	194	109377.9

T.R. Carter

TABLE 7: LAKE ERIE DRILLING STATISTICS

Year	EXPLORATORY				DEVELOPMENT				SERVICE		Total Wells	Cumul. Wells	Metres Drilled Metres	Cumul. Total
	Wells	Metres	Cumul. Wells	Cumul. Metres	Wells	Metres	Cumul. Wells	Cumul. Metres	Wells	Metres				
1960	9	4232	9	4232	29	10462	29	10462	0	0	38	257	14693	14693
1961	8	2626	17	6857	28	9141	57	19603	0	0	36	293	11767	26461
1962	8	3097	25	9954	39	13292	96	32895	0	0	47	340	16388	42849
1963	15	6286	40	16240	20	7116	116	40011	0	0	35	375	13402	56251
1964	0	0	40	16240	20	6551	136	46563	0	0	20	395	6551	62803
1965	5	1676	45	17916	31	10211	167	56774	0	0	36	431	11888	74691
1966	0	0	45	17916	15	5552	182	62326	15	1211	30	461	6763	81454
1967	21	10021	66	27938	11	3954	193	66280	0	0	32	493	13975	95429
1968	29	14477	95	42415	16	6709	209	72989	0	0	45	538	21186	116615
1969	33	18370	128	60785	28	10389	237	83378	5	2151	66	604	30909	147524
1970	11	6771	139	67556	42	20219	279	103596	0	0	53	657	26990	174514
1971	8	4192	147	71747	29	15745	308	119342	0	0	37	694	19937	194451
1972	19	11841	166	83589	18	9464	326	128806	0	0	37	731	21306	215757
1973	16	9781	182	93370	26	13286	352	142092	0	0	42	773	23068	238824
1974	27	12103	209	105473	26	12948	378	155040	0	0	53	826	25051	263875
1975	30	13684	239	119157	40	16649	418	171689	0	0	70	896	30332	294207
1976	25	14141	264	133298	47	19068	465	190757	0	0	72	968	33209	327416
1977	21	13767	285	147064	44	24792	509	215549	0	0	65	1033	38559	365975
1978	23	15152	308	162216	62	31114	571	246663	0	0	85	1118	46266	412241
1979	24	14360	332	176576	97	52018	668	298681	0	0	121	1239	66378	478619
1980	50	29657	382	206234	76	45502	744	344182	0	0	126	1365	75159	553778
1981	19	9349	401	215583	76	36268	820	380450	0	0	95	1460	45617	599395
1982	10	4848	411	220431	54	24488	874	404938	0	0	64	1524	29336	628731
1983	16	7532	427	227963	55	25101	929	430039	0	0	71	1595	32633	661364
1984	7	3671	434	231635	62	27450	991	457489	0	0	69	1664	31121	692485
1985	12	11291	446	242925	63	28155	1054	485643	0	0	75	1739	39445	731930
1986	0	0	446	242925	4	1183	1058	486826	0	0	4	1743	1183	733113
1987	0	0	446	242925	8	2854	1066	489680	0	0	8	1751	2854	735967
1988	5	2174	451	245099	28	11737	1094	501418	0	0	33	1784	13911	749878

TABLE 8: DRILLING SUMMARY BY TARGET, 1988

	EXPLORATORY WELLS					DEVELOPMENT WELLS				SERVICE	TOTAL	METRES DRILLED
AGE	OIL	GAS	DRY	SUS	SUCCESS %	OIL	GAS	DRY	SUCCESS %			
Devonian	0	0	1	0	0.0	16	0	6	72.7	16	39	4993.2
Clinton-Cataract	0	7	4	0	63.6	0	19	*11	63.3	0	41	15654.5
Salina-Guelph	1	4	18	0	21.7	0	6	3	66.7	31	63	38377.4
Ordovician	10	3	12	0	52.0	11	1	3	66.7	2	42	42387.7
Cambrian	2	0	3	0	40.0	0	2	2	50.0	0	9	7965.1
TOTAL	13	14	38	0	41.5	27	28	25	68.8	49	194	109377.9

* includes 1 lost hole

Three of the exploratory wells were successful, resulting in 2 oil producers and 1 gas producer. One of these wells, North Hawk Southwold 8-27-STRNB, was reported to be a potential gas producer in a previously untested area. Judo Dunwich 8-22-BF-A was completed as an oil producer in a test of a small fault block between the Willey and North Willey pools. One other well was completed as an oil producer after re-entry of a previously drilled well. Two development wells in the Blandford 3-7-VIII pool were successfully completed as gas producers.

Twenty-three exploratory wells were drilled to test Silurian carbonates in a search for oil and gas accumulations contained in Guelph Formation reefs and in porous dolomitized portions of the overlying A-1 and A-2 Carbonate units of the Salina Group. All 23 wells were drilled in onshore portions of Ontario; 19 in Lambton County, 2 in Huron County, 1 in Middlesex County, and 1 in Essex County. In Lambton County 3 wells were completed as gas producers and one as an oil producer. One of the wells in Huron County was also completed as a gas producer. Nine development wells were targeted on Silurian carbonates. Five of these wells were drilled on Lake Erie and resulted in 4 gas producers. The 4 wells drilled onshore resulted in 2 gas producers.

Forty-one wells were drilled to test Silurian sandstone targets in 1988, consisting of 11 exploratory wells and 30 development wells. Five of the exploratory wells and 23 of the development wells were drilled on Lake Erie, resulting in 1 gas producer and 12 gas producers respectively. The remaining wells were drilled in onshore portions of Norfolk, Haldimand, Welland, and Wentworth Counties. Six of the onshore development wells were completed as gas producers, and 7 of the exploratory wells were completed as gas producers.

One unsuccessful exploratory test of Devonian strata was drilled. The well is being assessed for possible use as an oil-field brine disposal well. Twenty-two Devonian development wells were drilled, resulting in 17 oil producers, 16 of which were in the Rodney oil pool.

Forty-nine service wells were drilled in Ontario in 1988, consisting of 14 brine disposal, 1 solution mining, 20 natural gas storage, 11 observation wells, and 3 stratigraphic tests. The natural gas storage wells consisted of 11 wells to develop the newly designated Moore 3-21-XII natural gas storage pool, 8 wells to improve deliverability from the Dawn 167 natural gas storage pool, and one well to improve deliverability from the Dawn 47-49 natural gas storage pool. In addition a total of 9 wells were drilled for observation purposes around Ontario natural gas storage pools, including 3 near the Kimball-Colinville pool, 1 near the Moore 3-21-XII pool, 2 near the Dawn 156 pool, 1 near the Dawn 167 pool, and 1 near the Terminus storage pool.

Relatively accurate drilling statistics are available for the period 1955 to 1988 (Table 9, Figure 5 and 6). During that time 2,887 exploratory, 3,635 development, and 815 service wells were drilled for a total of 7,337 wells. Total meterage amounted to 3,453,863 metres with an average depth of 470.7 metres.

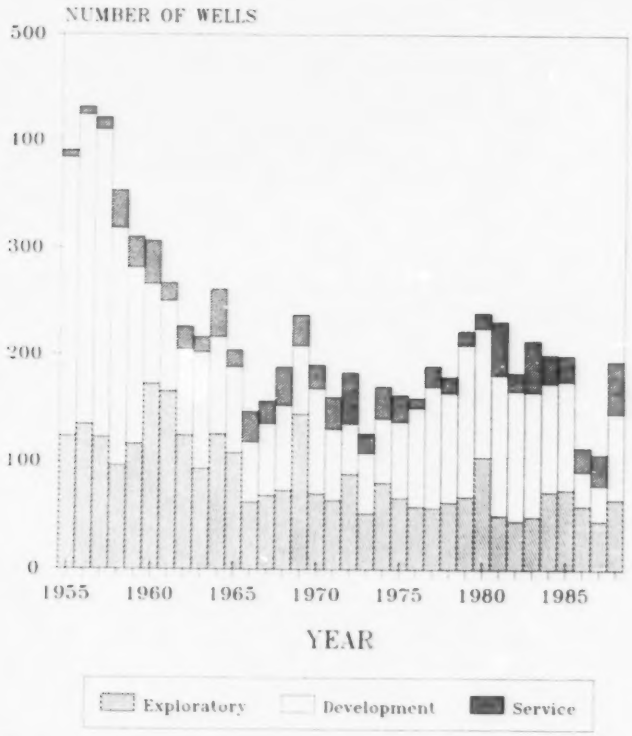

Figure 5. Exploratory, development, and service wells drilled annually in Ontario, 1955-1988.

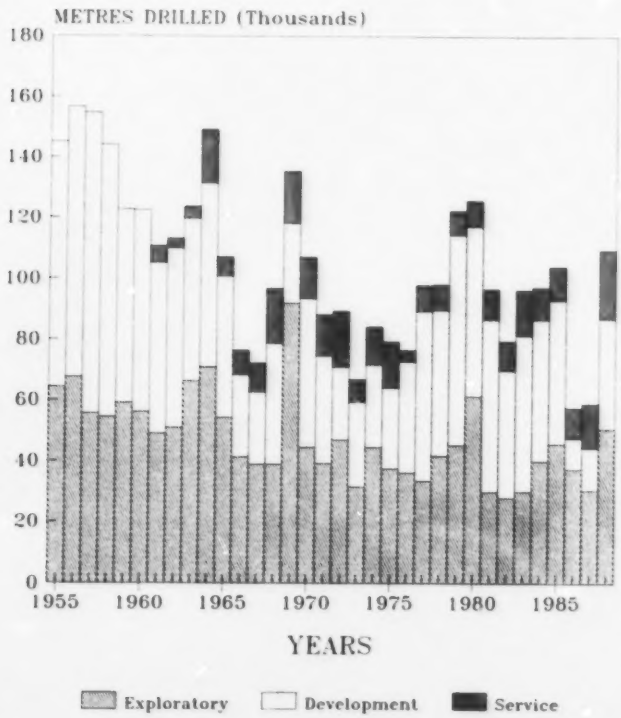

Figure 6. Exploratory, development, and service metres drilled annually in Ontario, 1955-1988.

TABLE 9: TOTAL DRILLING STATISTICS 1955 - 1988.

year	EXPLORATORY					DEVELOPMENT					SERVICE								
	wells	metres	ave. depth	cum. wells	cum. metres	wells	metres	ave. depth	cum. wells	cum. metres	wells	metres	ave. depth	cum. wells	cum. metres	total wells	cum. wells	total metres	cum. metres
1955	123	64414.6	523.7	123	64414.6	261	80662.0	309.0	261	80662	6			6	0.0	390	390	145076.6	145077
1956	134	67556.5	504.2	257	131971.1	290	89085.4	307.2	551	169747	7			13	0.0	431	821	156641.9	301718
1957	122	55660.4	456.2	379	187631.5	288	99079.5	344.0	839	268827	11			24	0.0	421	1242	154739.9	456458
1958	96	54504.3	567.8	475	242135.9	222	89702.0	404.1	1061	358529	35			59	0.0	353	1595	144206.4	600665
1959	116	59050.4	509.1	591	301186.3	165	63743.4	386.3	1226	422272	29			88	0.0	310	1905	122793.9	723459
1960	172	56107.6	326.2	763	357293.9	94	66373.5	706.1	1320	488646	40			128	0.0	306	2211	122481.1	845940
1961	165	49057.9	297.3	928	406351.8	85	56042.0	659.3	1405	544688	17	5473.0	21.9	145	5473.0	267	2478	110572.9	956513
1962	124	51013.5	411.4	1052	457365.3	81	58906.2	727.2	1486	603594	21	3062.0	145.8	166	8535.0	226	2704	112981.7	1069494
1963	93	66324.5	713.2	1145	523689.8	109	53386.6	489.8	1595	656981	14	3849.3	275.0	180	12384.3	216	2920	123560.4	1193055
1964	125	70824.5	566.6	1270	594514.3	91	60567.1	665.6	1686	717548	45	17738.8	394.2	225	30123.1	261	3181	149130.4	1342185
1965	108	54310.5	502.9	1378	648824.8	80	46476.5	581.0	1766	764024	16	6157.6	384.8	241	36280.6	204	3385	106944.6	1449130
1966	62	41181.8	664.2	1440	690006.6	56	27066.2	483.3	1822	791090	28	8074.5	288.4	269	44355.1	146	3531	76322.5	1525452
1967	68	38874.5	571.7	1508	728881.1	67	23815.8	355.5	1889	814906	21	9427.2	448.9	290	53782.3	156	3687	72117.5	1597570
1968	73	38823.3	531.8	1581	767704.4	79	39819.6	504.0	1968	854726	36	17955.5	498.8	326	71737.7	188	3875	96598.4	1694168
1969	144	91881.4	638.1	1725	859585.8	64	26345.9	411.7	2032	881072	29	16974.9	585.3	355	88712.6	237	4112	135202.2	1829370
1970	70	44411.2	634.4	1795	903997.0	98	49069.7	500.7	2130	930141	22	13434.7	610.7	377	102147.3	190	4302	106915.6	1936286
1971	64	39196.1	612.4	1859	943193.1	66	35323.5	535.2	2196	965465	30	13657.2	455.2	407	115804.5	160	4462	88176.8	2024463
1972	88	46991.9	534.0	1947	990185.0	47	23914.9	508.8	2243	989380	48	18445.9	384.3	455	134250.4	183	4645	89352.7	2113815
1973	52	31497.4	605.7	1999	1021682.4	56	27853.5	497.4	2299	1017233	18	7496.6	416.5	473	141746.9	126	4771	66847.5	2180663
1974	80	44415.2	555.2	2079	1066097.6	60	27143.9	452.4	2359	1044377	30	12602.6	420.1	503	154349.5	170	4941	84161.7	2264824
1975	66	37428.5	567.1	2145	1103526.1	71	26727.6	376.4	2430	1071105	25	15203.1	608.1	528	169552.6	162	5103	79359.2	2344184
1976	58	36088.3	622.2	2203	1139614.4	92	36600.9	397.8	2522	1107706	9	3804.5	422.7	537	173357.1	159	5262	76493.7	2420677
1977	57	33405.8	586.1	2260	1173020.2	113	55861.0	494.3	2635	1163567	19	8505.4	447.7	556	181862.6	189	5451	97772.2	2518450
1978	62	41724.1	673.0	2322	1214744.3	102	47902.9	469.6	2737	1211470	15	8448.8	563.3	571	190311.3	179	5630	98075.8	2616525
1979	67	45280.9	675.8	2389	1260025.2	142	69122.3	486.8	2879	1280592	13	7899.7	607.7	584	198211.0	222	5852	122?.?.9	2738828
1980	104	61244.1	588.9	2493	1321269.3	121	55954.2	462.4	3000	1336546	14	8383.5	598.8	598	206594.5	239	6091	125581.8	2864410
1981	50	29798.2	596.0	2543	1351067.5	131	56822.9	433.8	3131	1393369	50	9860.1	197.2	648	216454.6	231	6322	96481.2	2960891
1982	45	27813.2	618.1	2588	1378880.7	121	41890.9	346.2	3252	1435260	17	9772.0	574.8	665	226226.6	183	6505	79476.1	3040367
1983	49	29920.0	610.6	2637	1408800.7	116	51383.0	443.0	3368	1486643	48	14867.0	309.7	713	241093.6	213	6718	96170.0	3136537
1984	72	39874.4	553.8	2709	1448675.1	101	46725.5	462.6	3469	1533368	27	10558.1	391.0	740	251651.7	200	6918	97158.0	3233695
1985	74	45659.0	617.0	2783	1494334.1	101	47161.4	466.9	3570	1580530	24	11023.7	459.3	764	262675.4	199	7117	103844.1	3337539
1986	59	37284.3	631.9	2842	1531618.4	32	10226.3	319.6	3602	1590756	22	9941.9	451.9	786	272617.3	113	7230	57452.5	3394992
1987	45	30407.8	675.7	2887	1562026.2	33	13949.0	422.7	3635	1604705	29	14514.1	500.5	815	287131.4	107	7337	58870.9	3453863
1988	65	50569.9	778.0	2952	1612596.1	80	36321.0	454.0	3715	1641026	49	22487.0	458.9	864	309618.4	194	7531	109377.9	3563241

VI. Production

1. LICENCES

In 1988, 136 licences to produce oil and gas in Ontario were issued, compared to 145 in 1987. Table I-4 lists persons licensed to produce oil and gas in 1988.

2. OIL PRODUCTION

Oil production in Ontario increased dramatically in 1988. Production in 1988 totalled 190,572.7 cubic metres (1.2 million barrels), compared to 135,635 cubic metres in 1987, and only 84,610 cubic metres in 1983. The increase is due entirely to production from new Ordovician reservoirs discovered since 1983. Some of the wells in these new pools are capable of initial sustained production in excess of 47 cubic metres of oil per day (300 BOPD). There were 1,171 oil wells for which production was reported in Ontario in 1987, with an average production of 163 m3 per well. Ordovician wells were the most productive, with an average production of 1,863.8 m3 from each of 63 active wells.

Kent County produced the largest proportion of Ontario's oil production in 1988, accounting for 34.3% of the 1988 total. Production in Kent County increased significantly from 1987 due to new discoveries and development drilling in Romney Township, and in Dover Township near the Dover 7-5-V E Pool. On a pool basis the Hillman Pool in Essex County and the Dover 7-5-V E Pool were the largest producers in 1988. Together these two Ordovician pools produced over 63,000 cubic metres (398,000 barrels) of oil from 19 active wells in 1988.

For the fourth year in a row, Ordovician reservoirs produced more oil in 1988 than any other hydrocarbon-bearing strata in Ontario. Ordovician production totalled 117,357.8 m3 in 1988, accounting for 61.6% of total Ontario production (Table 11, Figure 8). Devonian oil pools contributed 17.5% of the total oil produced, followed by Silurian Salina-Guelph pools with 16.0% and Cambrian with 4.9%. Production from Ordovician pools is expected to dominate oil production in Ontario for at least the next several years.

All oil produced in Ontario is purchased by Esso Petroleum Canada, a division of Imperial Oil Limited, for processing through its Sarnia refinery. Ontario crude oil is received by Marcus Terminal Inc. in Sarnia, and delivered to Esso Petroleum Canada's custody transfer facility located adjacent to the terminal. Esso Canada posted prices for "Mersea Township" crude oil for the period June 1, 1985 to Jan.8, 1988 are listed in Table 12 and Figure 9. Mersea Township crude oil prices are used for reference purposes in this report to illustrate variations in Ontario crude oil prices.

Esso Petroleum Canada reports that oil valued at $22,235,266 was delivered from Ontario producers, for its account, to its terminal facilities in Sarnia in 1988. The average calculated price received by Ontario producers was $116.68/m3. In 1987 Ontario oil producers received $20,687,943, for an average price of $152.53/m3. The average price received for 1988 production was 24% less than in 1987.

Historical data on production of oil in Ontario are summarized in Table 13 and Figures 10 and 11.

3. NATURAL GAS PRODUCTION

Production of natural gas declined approximately 2 percent from 1987 to 503.4 million cubic metres (17.8 bcf) as new discoveries failed to replace production. This consisted of 383,571.8 thousand m3 from wells on Lake Erie, and 119,850.3 thousand m3 from wells on land. Lambton and Kent County accounted for the bulk of onshore production. Both totals represent minor declines from 1987 totals (see Table 14, Fig.12).

The most productive gas pools in 1988 were once again the Maitland Pool (Lake Erie) with 23.8% of total production, and the Morpeth Pool (Lake Erie) with 21.6% of total production. The Maitland Pool produces from Lower Silurian sandstones, while production in the Morpeth Pool is derived from the Silurian A-2 Carbonate Unit. The largest onshore production was derived from the Dawn 1-27-VI Pool, a Silurian Guelph Formation pinnacle reef.

As in the previous 6 years the bulk of the natural gas production in 1988 was derived from Lower Silurian sandstones of the Grimsby Formation and the overlying Thorold Formation, with some contribution from sandstones of the Whirlpool Formation and carbonates of the Reynales Formation. Reservoirs consist of porosity and permeability pinchouts in the sandstone units. Production from these "Clinton-Cataract" reservoirs accounted for 55.7% of total Ontario production in 1988 (see Table 15, Figure 13). Most of the remaining gas production was derived from dolomitized reefal carbonates of the Guelph Formation and associated zones of porosity and permeability in the Salina A-1 Carbonate Unit and A-2 Carbonate Unit.

There were 1,220 active gas wells in Ontario in 1988. Average production per well in 1988 was 413 thousand m3, approximately the same as 1987. According to information supplied by Union Gas Ltd the average price paid by Union Gas Ltd. to Ontario produc-

TABLE 10: OIL PRODUCTION BY POOL OR FIELD, 1988

County	Pool Name	Active Wells	Suspended Wells	Production 1988 m3	Operator 1988
ELGIN					
	Aldborough 4-A-VIII	1	0	23.3	Realoil
	Dunwich 16-I	2	0	194.7	Den-Mar
	Dunwich 18-I	1	0	33.1	Den-Mar
	Dunwich 8-22-ABF	1	0	2851.2	Judo
	Rodney	62	6	10086.5	Lakewood IV
		82	26	7971.8	Rayrock
	Wallacetown	6	12	69.6	PPC
	Willey	8	2	3386.9	Judo
	Subtotal	163	46	24617.1	
	% of Ontario Total			12.9%	
ESSEX					
	Colchester	5	10	633.7	Gaiswinkler
		1	0	285.9	Putman
	Gosfield North 5-13-IX	1	0	2.6	Gaiswinkler
	Gosfield South	8	0	736.4	Gaiswinkler
	Gosfield South 8-7-V	0	1	8.3	Consumers
	Hillman	11	2	37768.3	Consumers
	Malden	4	0	296.7	Gaiswinkler
	Malden 3-41-IV	1	0	105.0	Gaiswinkler
	Mersea 2-15-B	3	0	6066.9	Consumers
	Mersea 6-16-B	1	0	322.1	Pinnacle
	Mersea 8-16-VIII	1	0	61.0	Consumers
		2	0	6439.9	Ram
	Mersea 6-23-VII	2	1	2592.1	Consumers
		1	0	1228.9	Ram
	Staples	1	0	44.9	Brett
	Subtotal	42	14	56592.7	
	% of Ontario Total			29.7%	
HURON					
	Grand Bend	6	0	2192.3	Sunburst
	Tipperary	1	0	24.4	PPC
	Subtotal	7	0	2216.7	
	% of Ontario Total			1.2%	
KENT					
	Bothwell-Thamesville	4	0	269.3	Barnes
		11	5	32.3	Combined Larder
		14	0	838.6	Kodyen
		1	1	78.8	Pope
		2	1	9.4	Bryant
	Chatham	3	0	1017.6	Francisco
		1	0	230.9	Riddell-Hanna
	Clearville	10	3	1969.6	Murphy
	Dover	1	0	45.3	Avonry
		1	0	22.3	Marvan
		1	0	126.8	Francisco
	Dover 7-5-V E	8	1	25499.1	PPC
	Dresden	1	0	92.3	Brett
	Morpeth	NA		27.1	Consumers
	Romney 3-8-II	2	0	5679.5	Consumers
		1	0	158.8	Farmers
	Romney 7-10-II	1	0	6769.9	Consumers
	Romney 6-13-III	5	0	16580.3	Consumers
	Romney 6-13-IV	1	0	5901.4	Consumers
	Tilbury East 1-24-IX	1	0	3.3	Ram
	Subtotal	69	11	65352.6	
	% of Ontario Total			34.3%	
LAMBTON					
	Beaver Meadow	1	0	103.8	Brookwood
	Becher West	17	6	3928.1	Murphy
	Brigden	2	0	262.1	Consumers
		1	0	86.5	Ram
	Brooke	5	0	882.5	Crich
	Brooke 1-9-X	1	0	76.4	Bluewater
	Corey East	1	0	2746.2	Ram
	Corunna	10	0	1740.3	Esso
	Cromar	1	0	463.1	Corden
		1	0	30.8	Forbes
		1	0	60.3	Ram
	Dawn 28-II	1	0	38.3	Bryant
		3	0	2943.4	Brookwood
		2	0	744.3	Forbes
	Dawn 4-28-III	1	0	8.0	Brookwood
	Dawn Miscellaneous	3	0	37.3	Colonial
		5	0	363.7	Forbes
		2	0	392.1	LMG
		1	0	81.5	Proto

TABLE 10: Continued

County	Pool Name	Active Wells	Suspended Wells	Production 1988	Operator 1988 m3
		1	0	22.3	Union
	Edys Mills	2	0	1221.8	Ram
	Enniskillen 2-30-IX	1	0	22.0	Bluewater
	Enniskillen 7-30-IX	1	0	716.8	Francisco
	Ladysmith	3	2	2440.6	Michigan
	Logierait	NA		34.0	Brett
		1	0	25.1	Forbes
	London Road	1	0	24.3	Devran
	Moore 5-6-III	1	0	85.5	Underground Stor
	Moore 7-6-III	1	0	334.6	Crawford
	Moore 2-22-II	1	0	199.5	Oilfinders
	Oil Springs	6	0	31.3	Ayrheart
		22	0	242.6	Baldwin
		54	0	634.0	Barnes
		5	0	93.0	Byers
		200	0	2162.7	Charles Fairbank
		25	0	247.7	Donald
		38	0	412.5	D.W.Matheson
		31	13	34.3	Golden Hubris
		1	0	50.9	Johnston
		9	0	175.2	Kersey
		14	0	175.3	Mitchell
		4	0	48.4	Morningstar, L
		23	0	513.4	Morningstar
		30	20	393.0	Patterson
		24	16	211.5	Woods
	Otter Creek East	1	0	224.8	Cameron
	Petrolia	20	0	729.1	398311 Ontario
		5	8	364.1	490960 Ontario
		20	1	955.5	625052 Ontario
		12	0	137.9	625138 Ontario
		17	1	644.1	Ayrheart
		24	2	618.5	Bear Creek
		15	1	314.9	Bender
		1	0	84.7	Bradley
		12	9	155.6	Brand
		4	0	246.9	Cartier
		24	0	1126.6	Edward
		32	64	979.3	Lambton
		6	0	99.3	Lyons
		4	1	99.8	Oil Field
		12	2	432.7	Petrolia Disc.
		1	6	209.0	Sylab
		4	4	141.9	Vye
	Petrolia East	2	4	1160.8	Ram
	Plympton 5-19-VI	3	1	1880.7	Bluewater
	Seckerton	9	0	975.2	Esso
	Seckerton North	5	0	484.0	Esso
	Sombra 7-18-VII	1	0	97.6	Crawford
		1	0	62.0	Ram
	Sombra 6-28-IX	1	0	122.1	Crawford
	Sutorville	1	0	67.7	Brett
	Wanstead	4	0	675.5	Roth and Roth
	Warwick	1	1	395.0	Murphy
	Warwick 6-17-IV SER	1	0	442.0	Bluewater
	Watford-Kerwood	6	5	25.5	Chatham
	Subtotal	807	167	39493.8	
	% of Ontario Total			20.7%	
MIDDLESEX					
	Ekfrid 8-V S	1	1	116.4	Den-Mar
	Ekfrid 10-V S	1	0	83.6	Den-Mar
	Glencoe	36	106	1123.6	Glencoe Waterflood
		13	0	128.3	Brett
	Mosa 10-I R.S	1	0	90.5	Gaiswinkler
	North Willey	1	2	284.9	Judo
	Subtotal	53	109	1827.3	
	% of Ontario Total			1.0%	
OXFORD					
	Gobles	28	6	390.7	Brett
	Innerkip	1	0	12.4	Cameron
		1	0	69.4	Gaiswinkler
	Subtotal	30	6	472.5	
	% of Ontario Total			0.2%	
TOTAL		1171	353	190572.7	

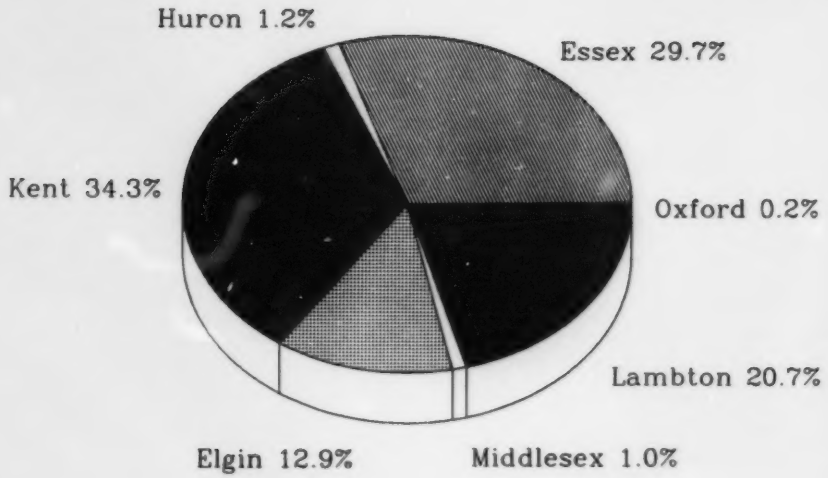

Figure 7. Percentage oil production by county.

TABLE 11: OIL PRODUCTION BY GEOLOGICAL AGE, 1983-1988

COUNTY	POOL NAME	m3 1983	1984	1985	1986	1987	1988
		DEVONIAN					
Elgin	Aldborough 3-8-16-XII	0.0	1653.0	425.8	113.4	0.0	0.0
	Rodney	20307.8	19450.1	19217.6	18798.7	17976.1	18058.3
	Wallacetown	63.0	55.9	118.8	93.3	126.9	69.6
Kent	Bothwell-Thamesville	1477.8	1467.8	1410.2	1425.9	1256.4	1228.4
	Prairie Siding	0.0	25.8	37.3	0.0	0.0	0.0
	Zone 6-5-IV	43.9	26.1	20.0	0.0	0.0	0.0
Lambton	Brooke 2-24-X	0.0	27.1	6.6	0.0	0.0	0.0
	Brooke 5-14-XII	12.1	4.0	0.0	0.0	0.0	0.0
	Florence-Oakdale	0.0	38.4	21.6	0.0	14.2	0.0
	London Road	0.0	0.0	0.0	0.0	104.3	24.3
	Oil Springs	6069.7	5953.9	6169.3	5996.8	5861.5	5425.8
	Petrolia	6361.1	6244.6	6619.2	7508.3	7534.5	7339.9
	Watford-Kerwood	52.9	0.0	0.0	0.0	33.3	25.5
	Wilsoncroft	31.8	7.7	9.1	0.0	0.0	0.0
Middlesex	Glencoe	356.1	264.7	810.1	1201.3	1170.0	1251.9
	Subtotal - Devonian	34776.2	35219.1	34865.6	35137.7	34077.2	33423.7
	% of Ontario production	41.1	39.0	30.9	25.9	25.1	17.5%
		SALINA-GUELPH(SILURIAN)					
Essex	Comber	0.0	0.0	10.5	0.0	0.0	0.0
	Staples	0.0	360.4	247.3	66.3	124.0	44.9
Huron	Grand Bend	2784.6	2459.4	2235.1	1951.0	1959.8	2192.3
	Tipperary	128.3	118.8	77.0	47.7	77.9	24.4
	Tipperary South	9.0	0.0	0.0	0.0	0.0	0.0
Kent	Chatham	331.0	236.2	249.7	739.2	1379.0	1248.5
	Dresden	145.1	129.9	114.0	115.2	106.2	92.3
	Fletcher	135.1	418.4	44.7	0.0	0.0	0.0
	Morpeth	25.0	27.0	42.7	26.7	42.3	27.1
Lambton	Beaver Meadow	0.0	0.0	0.0	0.0	36.3	103.8
	Becher West	5340.6	5255.6	5049.8	4527.5	4375.4	3928.1
	Brigden	245.0	229.2	194.8	238.0	413.0	348.6
	Brooke	1593.9	1023.9	817.8	628.7	538.8	82.5
	Brooke 1-9-X	296.9	178.6	133.0	65.1	110.6	76.4
	Corey East	3358.2	2997.6	2788.0	2924.0	2864.9	2746.2
	Corunna	2050.8	2185.2	1795.1	2416.6	1403.5	1740.3
	Cromar	600.4	642.5	475.7	663.7	577.9	554.2
	Dawn 156	224.4	146.9	94.2	80.4	0.0	0.0
	Dawn 7-13-X	0.0	0.0	0.0	0.0	0.0	0.0
	Dawn 28-II	1554.9	4932.9	2756.0	3646.8	3966.3	3726.0
	Dawn 4-28-III	272.8	160.4	69.0	48.5	52.0	8.0
	Dawn 5-29-IX	127.8	7.0	0.0	0.0	0.0	0.0
	Dawn Miscellaneous	1789.9	2101.2	1577.1	1901.6	1391.0	896.9
	Edys Mills	1406.0	1357.9	1305.6	1204.7	1518.4	1221.8
	Enniskillen 7-16-VI	0.0	0.0	0.0	0.0	0.0	0.0
	Enniskillen 2-30-IX	58.3	48.1	41.2	24.5	31.5	22.0
	Enniskillen 7-30-IX	0.0	644.2	509.1	106.1	79.1	716.8
	Euphemia 8-18-IV	0.0	0.0	17.4	0.0	0.0	0.0
	Ladysmith	2123.1	2266.4	2162.6	2433.7	2498.6	2440.6
	Logerait	0.0	0.0	8.8	99.1	109.4	59.1
	Moore 5-6-III	0.0	0.0	0.0	9.9	263.4	85.5
	Moore 7-6-III	562.5	567.6	378.3	879.4	935.2	334.6
	Moore 2-22-II	0.0	0.0	0.0	0.0	145.4	199.5
	Oil Springs East	22.9	14.4	24.5	0.0	0.0	0.0
	Osborne	76.5	47.5	43.8	38.3	15.7	0.0
	Otter Creek East	12.2	272.3	283.6	239.0	171.4	224.8
	Petrolia East	1832.9	1915.8	1891.0	1460.9	1313.9	1160.8
	Plympton 5-19-VI	3269.7	2418.6	1881.0	1509.1	1471.4	1880.7
	Seckerton	1211.3	1986.7	1067.0	2124.3	891.9	975.2
	Seckerton North	1171.2	808.9	767.0	1063.4	463.7	484.0
	Shetland	5.3	15.4	15.2	12.2	0.0	0.0
	Sombra 18-VII	108.8	142.5	152.8	163.4	163.7	159.6
	Sombra 4-9-XII	4.3	0.0	0.0	0.0	0.0	0.0
	Sombra 6-28-IX	110.6	108.1	95.4	54.3	90.0	122.1
	Sutorville	98.9	84.2	70.4	73.1	59.1	67.7
	Wanstead	705.8	700.1	573.6	721.5	784.5	675.5
	Warwick	688.4	584.8	552.3	486.4	545.1	395.0
	Warwick 6-17-IV SER	50.8	452.7	318.7	353.8	339.7	442.0
Middlesex	Mosa	129.6	108.2	109.1	112.5	96.4	90.5
	Subtotal - Silurian	34662.8	38155.5	31039.9	33256.6	31406.3	30398.3
	% of Ontario production	41.0	42.2	27.5	24.5	23.2	16.0%

TABLE 11: Continued

COUNTY	POOL NAME	m3 1983	1984	1985	1986	1987	1988
		ORDOVICIAN					
Elgin	Aldborough 4-A-VIII	119.1	77.0	53.4	51.8	6.9	23.3
Essex	Colchester	953.4	887.8	930.4	706.5	895.1	919.6
	Colchester South 5-15-V	0.0	0.0	0.0	0.0	0.0	0.0
	Gosfield North 5-13-IX	2.1	0.0	0.0	0.0	0.0	2.6
	Gosfield North 2-21-VI	0.0	0.0	0.0	0.0	0.0	0.0
	Gosfield South	1223.5	1189.4	937.1	801.6	702.4	736.4
	Gosfield South 1-I_III	0.0	0.0	0.0	0.0	9.1	0.0
	Gosfield South 8-7-V	0.0	0.0	0.0	0.0	15.9	8.3
	Hillman	0.0	395.8	24102.8	43687.8	40769.7	37768.3
	Maidstone 7-17-V	0.0	0.0	0.0	0.0	16.0	0.0
	Malden	348.9	349.5	265.7	332.9	265.4	296.7
	Malden 3-41-IV	149.7	106.7	115.0	85.4	90.8	105.0
	Mersea 4-14-I	0.0	0.0	0.0	0.0	0.0	0.0
	Mersea 7-15-A	0.0	0.0	0.0	0.0	12.0	0.0
	Mersea 2-15-B	0.0	342.7	349.0	137.6	4001.0	6066.9
	Mersea 6-16-B	0.0	0.0	0.0	357.4	390.3	322.1
	Mersea 8-16-VIII	0.0	0.0	0.0	0.0	0.0	6500.9
	Mersea 6-23-VII	0.0	0.0	0.0	701.6	805.1	3821.0
	Rochester 1-20-V EBR	0.0	69.8	135.3	56.7	0.0	0.0
	Ruscom River	0.0	0.0	0.0	0.0	0.0	0.0
Halton	Hornby	0.0	0.0	8.0	25.0	1.0	0.0
Kent	Dover	851.2	651.5	330.4	222.4	262.0	194.4
	Dover 1-11-V E	0.0	3.3	6.8	0.0	0.0	0.0
	Dover 7-5-V E	2953.3	5380.3	13214.6	11365.8	8100.7	25499.1
	Romney 3-8-II	0.0	0.0	0.0	3170.6	5258.3	5838.3
	Romney 7-10-II	0.0	0.0	0.0	0.0	0.0	6769.9
	Romney 6-13-III	0.0	0.0	0.0	0.0	1604.0	16580.3
	Romney 6-13-IV	0.0	0.0	0.0	0.0	0.0	5901.4
	Romney 5-15-I	0.0	0.0	0.0	0.0	0.0	0.0
	Tilbury East 1-24-IX	0.0	0.0	0.0	0.0	140.1	3.3
Manitoulin	Manitoulin	17.7	0.0	0.0	0.0	0.0	0.0
	Subtotal - Ordovician	6618.9	9453.8	40448.5	61703.1	63346.0	117357.8
	% of Ontario production	7.8	10.5	35.8	45.4	46.7	61.6%
		CAMBRIAN					
Elgin	Dunwich 16-I	329.8	333.8	243.6	206.5	222.1	194.7
	Dunwich 18-I	32.9	64.2	33.5	33.4	34.0	33.1
	Dunwich 8-22-ABF	0.0	0.0	0.0	0.0	0.0	0.0
	Willey	3843.0	3038.6	2755.7	2337.6	3298.8	3386.9
Kent	Clearville	2208.5	2325.2	2175.6	2106.5	1960.5	1969.6
	St. Patricks	0.0	0.0	0.0	0.0	0.0	0.0
	Zone 5-III	18.7	7.0	0.0	0.0	0.0	0.0
Middlesex	Ekfrid 10-V-S	138.2	98.3	98.4	105.5	102.2	83.6
	Ekfrid 8-V-S	92.1	135.6	99.8	89.4	142.3	116.4
	Willey North	166.0	26.4	0.0	0.0	451.7	3136.1
Oxford	Gobles	1438.1	1294.5	1067.9	644.4	565.8	390.7
	Innerkip	277.7	181.3	125.1	186.5	28.6	81.8
	Innerkip East	9.5	0.0	0.0	9.1	0.0	0.0
	Subtotal - Cambrian	8554.5	7504.9	6599.6	5718.9	6805.9	9392.9
	% of Ontario production	10.1	8.3	5.8	4.2	5.0	4.9%
	Total production	84612.4	90333.3	112953.6	135816.3	135635.4	190572.7

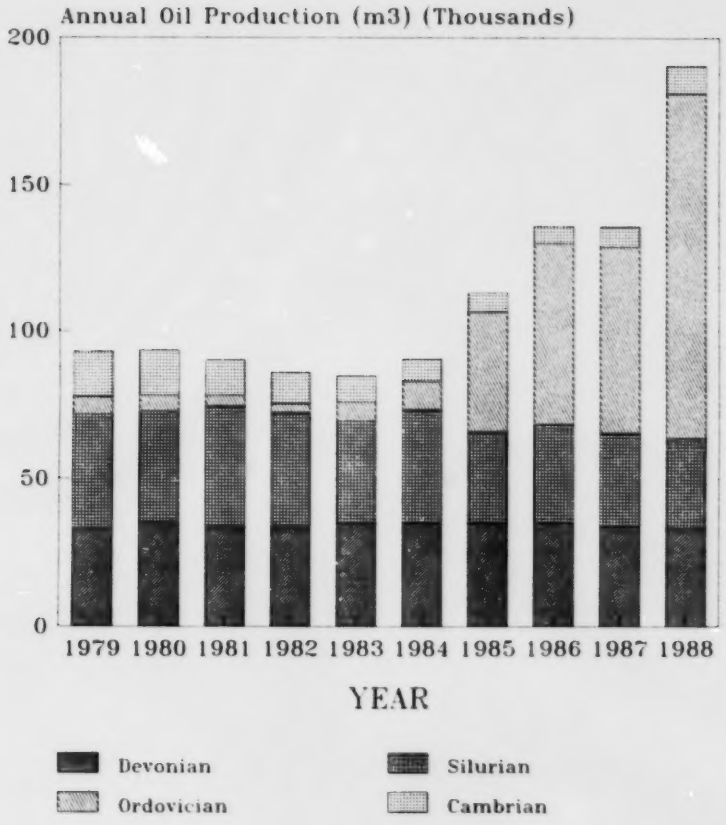

Figure 8. Annual oil production by geological age, 1979-1988.

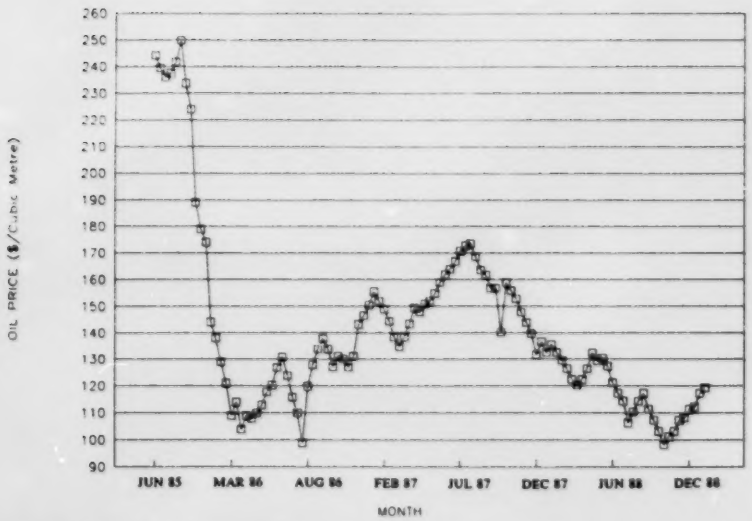

Figure 9. Mersea Township crude oil prices in Ontario, 1985-1988.

TABLE 12: MERSEA TOWNSHIP CRUDE OIL PRICES IN ONTARIO, 1985-1988.

Date	Price $/cubic metre
01-Jun-85	244.04
01-Jul-85	239.32
09-Jul-85	236.06
01-Sep-85	237.44
01-Oct-85	241.56
26-Nov-85	249.64
12-Dec-85	233.64

Date	Price $/cubic metre
10-Jan-86	223.99
22-Jan-86	189.01
28-Jan-86	179.01
01-Feb-86	174.08
15-Feb-86	143.99
19-Feb-86	137.99
27-Feb-86	128.98
04-Mar-86	121.04
06-Mar-86	109.02
20-Mar-86	113.95
26-Mar-86	103.99
11-Apr-86	108.94
19-Apr-86	107.83
24-Apr-86	109.83
29-Apr-86	112.84
03-May-86	117.81
08-May-86	120.31
09-May-86	126.81
15-May-86	130.81
04-Jun-86	123.86
10-Jun-86	115.85
05-Jul-86	109.83
10-Jul-86	98.80
06-Aug-86	119.81
12-Aug-86	127.83
21-Aug-86	133.86
06-Sep-86	137.84
11-Sep-86	133.84
17-Sep-86	127.09
14-Nov-86	131.09
02-Dec-86	130.09
10-Dec-86	127.06
16-Dec-86	131.07
23-Dec-86	143.07

Date	Price $/cubic metre
01-Jan-87	146.39
08-Jan-87	150.37
13-Jan-87	155.36
31-Jan-87	151.75
13-Feb-87	148.77
20-Feb-87	144.22
27-Feb-87	138.22
04-Mar-87	134.72
05-Mar-87	138.23
10-Mar-87	143.24
19-Mar-87	149.17
17-Apr-87	147.69
23-Apr-87	150.73
28-Apr-87	151.75
12-May-87	154.74
15-May-87	158.76
09-Jun-87	161.77
18-Jun-87	163.77
07-Jul-87	166.72
16-Jul-87	170.70
18-Jul-87	172.70
01-Aug-87	173.53
19-Aug-87	168.56
26-Aug-87	163.53
01-Sep-87	161.70
05-Sep-87	156.69
17-Sep-87	156.70
23-Oct-87	140.10
06-Nov-87	158.72
13-Nov-87	155.71
20-Nov-87	152.69
15-Dec-87	147.66
17-Dec-87	143.66
22-Dec-87	139.66
25-Dec-87	131.65

Date	Price $/cubic metre
08-Jan-88	136.60
19-Jan-88	132.54
21-Jan-88	135.54
02-Feb-88	132.50
25-Feb-88	129.46
04-Mar-88	126.43
05-Mar-88	122.43
22-Mar-88	120.41
31-Mar-88	122.37
13-Apr-88	126.40
19-Apr-88	132.36
12-May-88	129.38
01-Jun-88	130.36
10-Jun-88	127.33
18-Jun-88	121.30
29-Jun-88	117.26
01-Jul-88	114.31
16-Jul-88	106.27
21-Jul-88	110.25
26-Jul-88	114.25
19-Aug-88	117.25
08-Sep-88	111.37
04-Oct-88	107.31
06-Oct-88	103.28
08-Oct-88	98.27
14-Oct-88	101.27
24-Nov-88	103.25
29-Nov-88	107.24
07-Dec-88	108.20
09-Dec-88	111.25
16-Dec-88	112.25
24-Dec-88	117.24

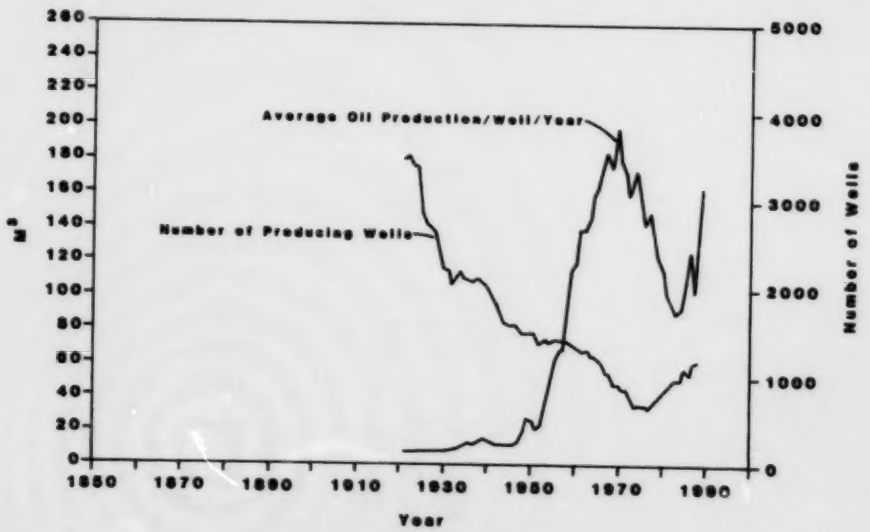

Figure 10. Number of producing oil wells and average oil production/well/year, 1921-1988.

TABLE 13: Historical Oil Production 1863 - 1988.

Year	Number of Producing Oil Wells	Oil Production m3	Aver. Oil Production /Well/Year	Cumulative Production m3
1863		18125		18125
1864		23530		41655
1865		28936		70590
1866		34341		104931
1867		39747		144678
1868		45152		189831
1869		50558		240388
1870		56774		297163
1871		57911		355073
1872		59047		414120
1873		60183		474303
1874		61319		535623
1875		62456		598078
1876		63592		661670
1877		64728		726398
1878		65865		792263
1879		67001		859264
1880		68137		927401
1881		72673		1000074
1882		77222		1077295
1883		81765		1159060
1884		87216		1246276
1885		93120		1339396
1886		97663		1437059
1887		98572		1535631
1888		115266		1650896
1889		112881		1763777
1890		119240		1883017
1891		123215		2006232
1892		121625		2127857
1893		127190		2255047
1894		131164		2386211
1895		132754		2518965
1896		124010		2642975
1897		119240		2762215
1898		122420		2884635
1899		108906		2993542
1900		107316		3100858
1901		99367		3200225
1902		84263		3284488
1903		75519		3360007
1904		77109		3437115
1905		96187		3533302
1906		93637		3626939
1907		123990		3750929
1908		84097		3835027
1909		66880		3901906
1910		49987		3951893
1911		45889		3997782
1912		38306		4036088
1913		35958		4072045
1914		33784		4105829
1915		34094		4139923
1916		31301		4171224
1917		32273		4203497
1918		45909		4249406
1919		34993		4284399
1920		28896		4313295
1921	3465	27482	8	4340777
1922	3506	26190	7	4366967
1923	3407	25342	7	4392310
1924	3379	24534	7	4416844
1925	2884	22934	8	4439778
1926	2752	21777	8	4461555
1927	2708	22195	8	4483750
1928	2641	21330	8	4505080
1929	2443	19257	8	4524338
1930	2222	18650	8	4542987
1931	2208	19454	9	4562442
1932	2056	20723	10	4583164
1933	2151	21631	10	4604796
1934	2201	22478	10	4627274
1935	2109	26239	12	4653514
1936	2079	26311	13	4679825
1937	2082	26265	13	4706090
1938	2110	27448	13	4733538
1939	2065	32812	16	4766350
1940	2028	29833	15	4796183
1941	1956	25348	13	4821531
1942	1852	22870	12	4844401
1943	1728	21064	12	4865465
1944	1609	19884	12	4885349
1945	1579	18017	11	4903367
1946	1610	19568	12	4922935
1947	1559	20874	13	4943809
1948	1489	28139	19	4971948
1949	1518	41443	27	5013391
1950	1513	39851	26	5053243
1951	1471	31348	21	5084590
1952	1381	30496	22	5115086
1953	1423	47646	33	5162732
1954	1396	65578	47	5228311
1955	1433	83549	58	5311860
1956	1422	94338	66	5406198
1957	1428	99155	69	5505353
1958	1412	123746	88	5629099
1959	1384	159239	115	5788338
1960	1339	159787	119	5948125
1961	1312	182690	139	6130815
1962	1300	180377	139	6311192
1963	1311	191639	146	6502831
1964	1243	198207	159	6701038
1965	1234	203371	165	6904408
1966	1183	210464	178	7114873
1967	1068	197192	185	7312064
1968	1041	182959	176	7495024
1969	929	184726	199	7679749
1970	920	166693	181	7846442
1971	873	152326	174	7998768
1972	878	139608	159	8138376
1973	756	128565	170	8266941
1974	673	116707	173	8383649
1975	693	111978	162	8495627
1976	695	98812	142	8594439
1977	658	98372	150	8692811
1978	715	95144	133	8787956
1979	760	92932	122	8880888
1980	805	93299	116	8974186
1981	872	90105	103	9064291
1982	917	85711	93	9150002
1983	953	84612	89	9234614
1984	961	90333	94	9324947
1985	1102	112954	102	9437901
1986	1069	135816	127	9573717
1987	1175	135635	115	9709353
1988	1171	190573	163	9899925

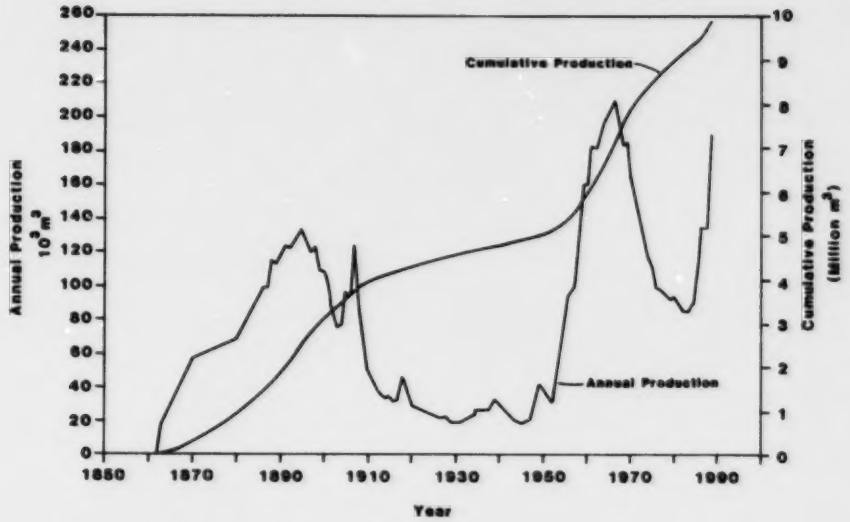

Figure 11. Annual and cumulative oil production, 1863-1988.

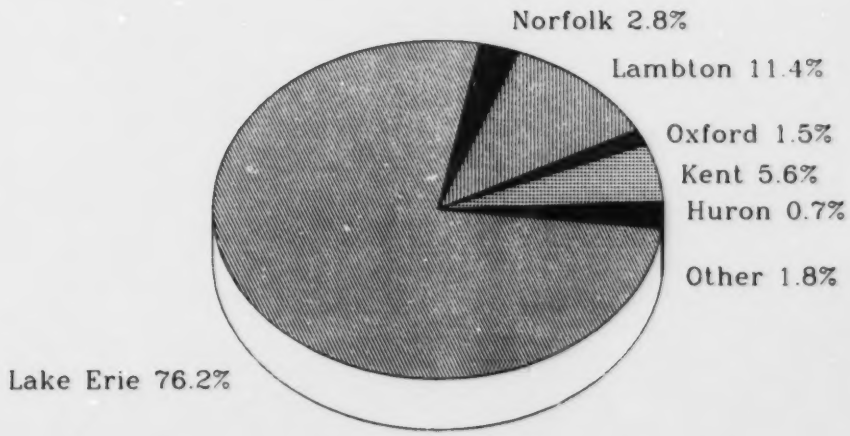

Figure 12. Percentage total gas production by area, 1988.

TABLE 14: NATURAL GAS PRODUCTION BY POOL OR FIELD, 1988

County	Pool Name	Active Wells	Suspended Wells	Production 1988 1000 m3	Operator 1988
BRANT	Brant	22	4	241.5	Hyslop
	Subtotal	22	4	241.5	
	% of Ontario Total			0.0%	
ELGIN	Aldborough 4-20-VII	1	1	617.2	Intrex
	Cowal	2	1	328.3	Union
	Townline	8	1	1953.8	Union
	Subtotal	11	3	2899.3	
	% of Ontario Total			0.6%	
HALDIMAND	Haldimand	5	11	193.4	Can-Gas
		15	3	2104.0	Fisherville
		65	0	745.5	Glenfred
		6	3	77.9	Lincoln
		18	0	119.7	Robins
		40	16	283.7	Wellandport
	Subtotal	149	33	3524.2	
	% of Ontario Total			0.7%	
HURON	Ashfield 7-1-III ED	2	0	173.4	Northern
	Bayfield	2	0	16.7	PPC
	Stanley 4-7-XI	2	0	2047.5	PPC
	Tipperary	2	1	694.4	PPC
	Tipperary South	2	0	544.5	PPC
	Subtotal	10	1	3476.5	
	% of Ontario Total			0.7%	
KENT	Botany	2	1	662.3	Cameron
	Camden Gore	12	1	1487	Union
	Chatham	9	3	564.6	Union
		4	1	574.7	York
	D'Clute	1	0	255.4	Union
	Dover	4	0	1538.7	Union
	Dover 7-5-V E	9	0	14220.9	PPC
	Doyles	1	0	118.7	Cameron
	Dover 7-10-VI	1	0	3.5	J.W.K.
	Morpeth	8	3	639.4	Pegg
	St. Patricks	1	0	21.3	Cameron
	Tilbury	30	2	6491.6	Union
	Wolfe	1	0	206.0	Raen
	Zone	30	9	1416.9	Union
	Subtotal	113	20	28201	
	% of Ontario Total			5.6%	
LAMBTON	Avonry	1	1	253.4	Avonry
	Becher West	23	13	1060.7	Murphy
	Brigden	2	0	577.6	Consumers
	Charlemont	1	0	459.3	Cameron
	Corunna	2	0	137.1	Esso
	Coveny	1	1	4236.1	Union
	Cromar	1	0	720.9	Forbes
	Dawn 1	6	1	901.9	Union
	Dawn 1-27-VI	1	3	18125.9	Union
	Dawn 7-28-V	1	1	1985.0	Union
	Dawn 2-30-XIV	1	0	718.9	Cameron
	Dawn 5-30-IV	2	0	260.6	Union
	Dawn Miscellaneous	2	0	254.3	Colonial
		3	3	578.6	Forbes
		5	4	725.6	Union
	Edys Mills	1	2	4537.5	Ram
	Edys Mills East	1	0	3.7	Ram
	Enniskillen 26	1	2	678.4	Clake
	Enniskillen 6-15-II	1	0	618.3	Bluewater
	Logierait	1	0	14.0	Brett
	Moore 5-6-III	1	0	96.9	Undergroud
	Moore 2-13-VIII	1	0	982.1	Talcorp
	Moore 2-22-II	1	0	436.8	Oilfinders
	Moore 7-27-VI	1	0	75.1	Raen
	Oil City	1	2	5544.9	Union
	Otter Creek East	3	0	388.6	Brett
	Otter Creek	1	0	110.6	Ram
		4	0	630.8	Cameron
	Sombra 2-23-XII	1	0	1280.4	Bluewater
		1	0	10035.7	Brett
	Sombra 3-26-VI	1	0	1162.8	Ram
	Subtotal	73	33	57592.5	
	% of Ontario Total			11.4%	

TABLE 14: Continued

County	Pool Name	Active Wells	Suspended Wells	Production 1988 1000 m3	Operator 1988
LINCOLN	Lincoln	10	0	255.1	Consumers
	Subtotal	10	0	255.1	
	% of Ontario Total			0.1%	
NORFOLK	Hemlock	7	2	831.0	Hemlock
	Norfolk	14	0	1698.4	Bayview
		29	4	2380.7	Chatham
		22	1	895.4	Colonial
		6	2	1449.0	Consumers
		5	0	402.0	Cons. Expl.
		42	18	2977.5	Craven
		10	0	974.1	F&M
		7	1	538.2	Fernlea
		3	0	134.4	Freeman
		3	0	98.4	Jourika
		2	0	107.6	Morrison, D
		2	0	53.8	Morrison, R
	Venison Creek	14	0	1788.1	Cons. Expl.
	Subtotal	166	28	14328.6	
	% of Ontario Total			2.8%	
OXFORD	Blandford 3-7-VIII	1	0	2634.5	Nith
	Innerkip	3	1	1045.0	Nith
		2	0	3999.7	Northquest
	Subtotal	6	1	7679.2	
	% of Ontario Total			1.5%	
WELLAND	Welland	18	4	507.0	Consumers
		3	0	0.2	Fox
		2	0	19.9	George
		2	0	4.5	Marr
		3	0	86.2	N.B. Energy
		1	0	6.0	Ort
		3	0	226.1	Ruch
	Subtotal	29	4	849.9	
	% of Ontario Total			0.2%	
WELLINGTON	Arthur	3	0	802.5	Kenartha
	Subtotal	3	0	802.5	
	% of Ontario Total			0.2%	
	ONSHORE Subtotal	592	127	119850.3	
	% of Ontario Total			23.8%	
LAKE ERIE PRODUCTION UNITS					
	Clear Creek	79	24	58486.9	Consumers
	D'Clute	0	1	0.0	C.W.P.
		10	2	1478.4	Pembina
	Dover	21	5	6298.1	C.W.P.
		12	0	811.7	Mitchell
		18	3	3335.9	Place
	Leepfrog	8	4	6672.1	Consumers
	Maitland	6	3	319.1	Mitchell
		215	8	118748.9	Pembina
		16	0	544.6	Place
	Morpeth	26	9	108618.1	Consumers
	Selkirk	45	11	7527.2	Mitchell
		38	0	6049.9	Place
	Silver Creek	69	37	52578.9	Consumers
	Tilbury	65	10	12102.0	C.W.P.
	LAKE ERIE subtotal	628	117	383571.8	
	% of Ontario Total			76.2%	
TOTAL		1220	244	503422.1	

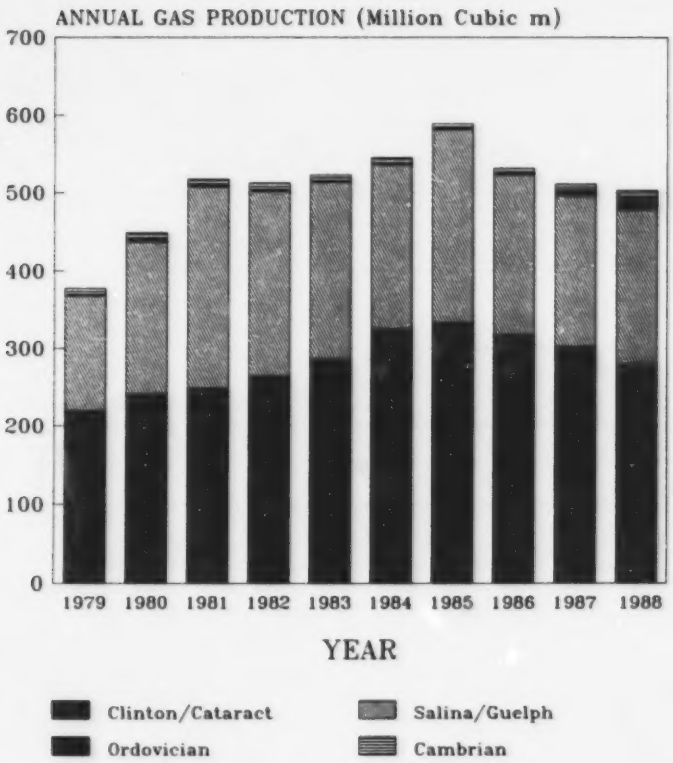

Figure 13. Annual gas production by geological age, 1979-1988.

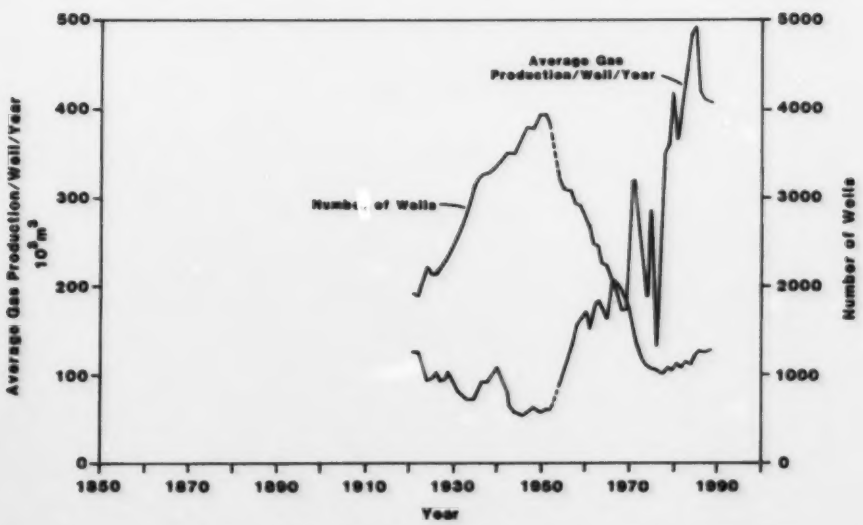

Figure 14. Number of producing gas wells and average gas production/well/year, 1921-1988.

TABLE 15: NATURAL GAS PRODUCTION BY GEOLOGICAL AGE, 1983-1988.

COUNTY	POOL NAMES	1000 m3 1983	1984	1985	1986	1987	1988
		SILURIAN CLINTON/CATARACT					
Brant	Brant	382.3	407.4	394.3	382.1	358.7	241.5
Haldimand	Haldimand	1822.9	1660.1	1614.9	1463.2	1467.7	3524.2
Lincoln	Lincoln	228.2	276.6	249.2	256.7	270.8	255.1
Norfolk	Hemlock	737.1	724.5	925.0	870.9	744.9	831.0
	Norfolk	19305.4	19547.2	19886.1	21102.2	21697.8	11709.5
	Venison Creek	4181.1	3567.8	2800.6	2357.5	2087.3	1788.1
	Wilsonville	0.0	0.0	0.0	0.0	0.0	0.0
	Wilsonville South	0.0	0.0	0.0	0.0	0.0	0.0
Oxford	Norwich South	0.0	0.0	0.0	0.0	0.0	0.0
Welland	Welland	719.0	783.0	950.4	951.2	916.2	849.9
	Sherkston	0.0	0.0	0.0	0.0	0.0	0.0
Lake Erie	Clear Creek	53613.8	48429.5	53904.9	53180.6	44942.8	58486.9
	Colborne	0.0	0.0	0.0	0.0	0.0	0.0
	Dover	17207.0	16243.0	13930.5	11368.4	12269.0	10445.7
	Leepfrog	7417.0	4345.5	3888.4	3208.2	7863.8	6672.1
	Maitland	115526.2	140992.1	150374.8	139479.9	125378.8	119612.6
	Selkirk	12036.8	13049.0	15931.1	16874.6	15069.6	13577.1
	Silver Creek	53618.9	74863.7	68463.2	65965.4	69415.2	52578.9
	Subtotal - Clin/Cat	286795.7	324889.4	333313.4	317460.9	302482.5	280572.6
	% of Ontario production	54.8	59.6	56.6	59.7	59.2	55.7
		SILURIAN SALINA/GUELPH					
Elgin	Aldborough 4-20-VII	18.3	2.3	130.7	882.9	654.1	617.2
	Cowal	315.0	291.9	280.4	278.7	250.1	328.3
	Townline	2021.7	1162.7	659.6	165.1	890.3	1953.8
Huron	Ashfield 7-1-III ED	0.0	0.0	0.0	0.0	0.0	173.4
	Bayfield	1705.9	1525.9	587.0	43.1	0.0	16.7
	Stanley 4-7-XI	0.0	0.0	2738.5	7224.8	5748.3	2047.5
	Tipperary	1013.1	1003.1	843.6	1042.5	641.4	694.4
	Tipperary South	1191.6	936.5	910.8	696.1	728.7	544.5
Kent	Botany	631.4	1023.2	875.6	880.6	970.5	662.3
	Camden 1-11-XIV Gore	0.0	0.0	1083.2	238.0	0.0	0.0
	Camden 6-10-IX Gore	0.0	0.0	0.0	0.0	0.0	0.0
	Camden Gore	1449.4	1447.1	1487.8	1433.2	1440.9	1487.0
	Chatham	1265.5	1028.7	1328.1	1286.1	1249.1	1139.3
	D'Clute	209.6	265.2	213.6	246.4	284.4	255.4
	Doyles	0.0	0.0	0.0	20.8	380.8	118.7
	Morpeth	756.2	722.3	695.2	651.6	634.5	639.4
	Tilbury	6971.6	6044.2	5766.7	5910.1	6291.3	6491.6
	Wolfe	169.8	146.4	129.8	193.2	220.4	206.0
	Zone	1943.1	1752.2	1588.2	1881.4	1638.1	1416.9
Lambton	Avonry	0.0	0.0	0.0	832.9	816.5	253.4
	Becher East	14.6	0.0	0.0	0.0	0.0	0.0
	Becher West	1066.2	1689.4	1357.1	1513.1	1370.7	1060.7
	Brigden	915.2	876.2	770.5	728.9	612.7	577.6
	Charlemont	97.2	134.9	136.6	290.6	563.8	459.3
	Corunna	176.2	183.4	142.0	207.0	133.0	137.1
	Coveny	2505.7	902.1	2226.1	2478.9	3889.1	4236.1
	Cromar	262.5	839.7	531.5	0.0	319.5	720.9
	Dawn 1	583.7	971.3	427.5	1258.1	1037.3	901.9
	Dawn 1-27-VI	0.0	0.0	15562.4	19353.3	18597.1	18125.9
	Dawn 7-28-V	3266.1	2444.3	1360.3	2334.9	2122.8	1985.0
	Dawn 5-29-IX	525.3	0.0	0.0	0.0	0.0	0.0
	Dawn 2-30-XIV	0.0	0.0	0.0	0.0	78.2	718.9
	Dawn 5-30-IV	353.4	339.2	446.1	301.6	409.8	260.6
	Dawn Miscellaneous	2602.8	2116.0	939.6	2108.1	2142.9	1558.5
	Edys Mills	2835.0	3838.9	3553.1	3830.3	4392.7	4537.5
	Edys Mills East	277.3	139.0	99.6	48.3	66.7	3.7
	Enniskillen 26	0.0	0.0	0.0	544.9	669.3	678.4
	Enniskillen 6-15-II	0.0	0.0	0.0	0.0	0.0	618.3
	Logierait	0.0	0.0	0.0	345.0	309.2	14.0
	Moore 5-6-III	0.0	0.0	0.0	785.1	964.9	96.9
	Moore 2-13-VIII	0.0	0.0	0.0	0.0	1158.2	982.1
	Moore 3-21-XII	61378.0	60946.0	5646.0	0.0	0.0	0.0
	Moore 2-22-II	0.0	0.0	0.0	2106.9	1073.1	436.8
	Moore 7-27-VI	0.0	106.1	1132.5	771.3	74.3	75.1
	Moore 5-28-VIII	0.0	0.0	0.0	0.0	0.0	0.0
	Moore 5-50-Front	0.0	0.0	0.0	0.0	0.0	0.0
	Oil City	2587.2	6397.8	5834.0	4876.3	8059.4	5544.9
	Oil Springs East	5794.8	4310.2	2829.6	2088.0	0.0	0.0
	Otter Creek	1090.1	966.4	845.0	657.1	922.3	741.4
	Otter Creek East	605.1	484.6	473.4	433.3	374.6	388.6
	Sarnia 1-8-A	308.7	0.0	60173.0	26947.0	0.0	0.0
	Sarnia 5-3-II	0.0	0.0	0.0	0.0	0.0	0.0
	Sarnia 2-11-VIII	0.0	0.0	0.0	0.0	0.0	0.0
	Sombra 5-11-XII	0.0	0.0	0.0	0.0	0.0	0.0

TABLE 15: Continued

COUNTY	POOL NAMES	1000 m3 1983	1984	1985	1986	1987	1988
Lambton	Sombra 4-9-XII	904.7	712.2	26.0	0.0	0.0	0.0
	Sombra 4-16-IX	0.0	0.0	0.0	0.0	0.0	0.0
	Sombra 2-23-XII	0.0	0.0	0.0	0.0	6947.5	11316.1
Oxford	Brownsville	0.0	0.0	0.0	0.0	0.0	0.0
Lake Erie	Atlas	0.0	0.0	0.0	0.0	0.0	0.0
	D'Clute	877.3	2122.9	2197.9	1743.2	1607.8	1478.4
	Ericau	0.0	0.0	0.0	0.0	0.0	0.0
	Morpeth	103197.8	85839.1	105008.1	92022.4	100442.8	108618.1
	Tilbury	15518.2	17902.2	17085.9	14188.4	13009.1	12102.0
	Subtotal - Salina/Guelph	227405.3	211613.6	248122.6	205869.5	194088.1	197420.6
	% of Ontario production	43.5	38.8	42.1	38.7	38.0	39.2
	ORDOVICIAN						
Elgin	Aldborough 7-18-IV	0.0	0.0	0.0	0.0	0.0	0.0
Kent	Dover	1209.4	1112.2	1277.8	1388.1	1526.1	1538.7
	Dover 7-5-V E	0.0	0.0	0.0	227.8	4074.2	14220.9
	Dover 7-10-VI E	112.4	103.4	107.1	51.5	34.2	3.5
Lambton	Sombra 3-26-VI	0.0	0.0	0.0	214.3	1609.6	1162.8
Wellington	Arthur	1235.6	1181.5	1216.5	1235.8	1204.4	802.5
	Subtotal - Ordovician	2557.4	2397.1	2601.4	3117.5	8448.5	17728.4
	% of Ontario production	0.5	0.4	0.4	0.6	1.7	3.5
	CAMBRIAN						
Kent	St. Patricks	0.0	0.0	0.0	0.0	171.9	21.3
Oxford	Blandford 3-7-VIII	0.0	0.0	0.0	0.0	685.0	2634.5
	Innerkip	5809.3	5708.9	4418.7	4961.2	5455.2	5044.7
	Innerkip East	391.9	400.4	289.8	318.1	0.0	0.0
	Subtotal - Cambrian	6201.2	6109.3	4708.5	5279.3	6312.0	7700.5
	% of Ontario production	1.2	1.1	0.8	1.0	1.2	1.5
	Total production	522959.6	545009.4	588745.9	531727.2	511331.1	503422.1

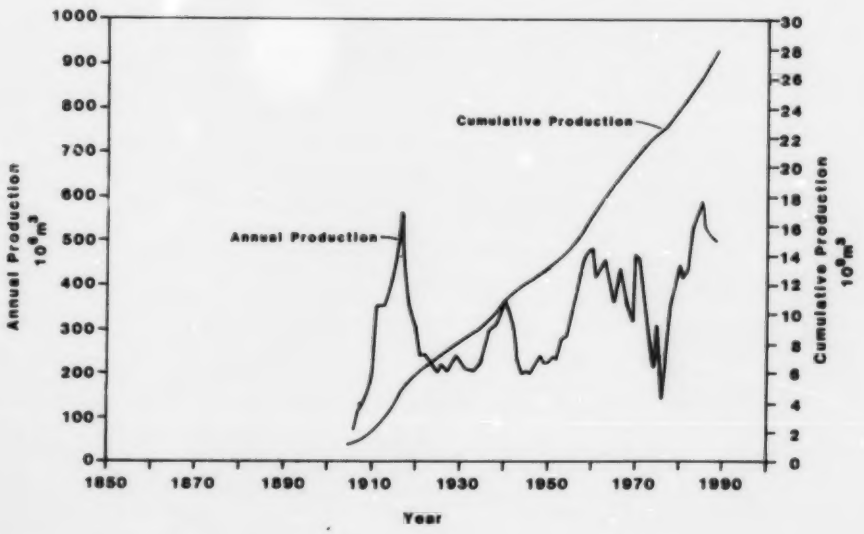

Figure 15. Annual and cumulative gas production, 1906-1988.

TABLE 16: LAKE ERIE GAS PRODUCTION 1960 TO 1988.

Year	Number of Active Wells	Number of Suspended Wells	Production (1000 m3)	Average Production/ Well(1000 m3)	Cumulative Production (1000 m3)
1960	127	17	102021.4	803.3	1083614.1
1961	145	41	92750.8	639.7	1176364.8
1962	172	49	87687.6	509.8	1264052.5
1963	168	74	100090.7	595.8	1364143.1
1964	196	63	97954.7	499.8	1462097.8
1965	225	57	105758.6	470.0	1567856.4
1966	228	60	125980.1	552.5	1693836.5
1967	200	86	117186.6	585.9	1811023.1
1968	222	81	103471.6	466.1	1914494.7
1969	223	107	117103.9	525.1	2031598.7
1970	250	90	144800.2	579.2	2176398.8
1971	268	47	143558.8	535.7	2319957.6
1972	272	59	175858.4	646.5	2495816.0
1973	285	49	181161.6	635.7	2676977.6
1974	291	73	151038.1	519.0	2828015.7
1975	272	107	160309.0	589.4	2988324.7
1976	279	114	80587.0	288.8	3068911.7
1977	320	141	157891.5	493.4	3226803.2
1978	328	100	212634.5	648.3	3439437.7
1979	344	119	213870.3	621.7	3653308.0
1980	376	NA	272426.3	724.5	3925734.3
1981	474	NA	324283.3	684.1	4250017.6
1982	444	NA	353013.6	795.1	4603031.2
1983	527	161	383651.0	728.0	4986682.2
1984	585	148	407790.0	697.1	5394472.2
1985	610	153	430784.8	706.2	5825257.0
1986	622	123	398031.1	639.9	6223288.1
1987	601	NA	389998.9	648.9	6613287.0
1988	628	117	383571.8	610.8	6996858.8

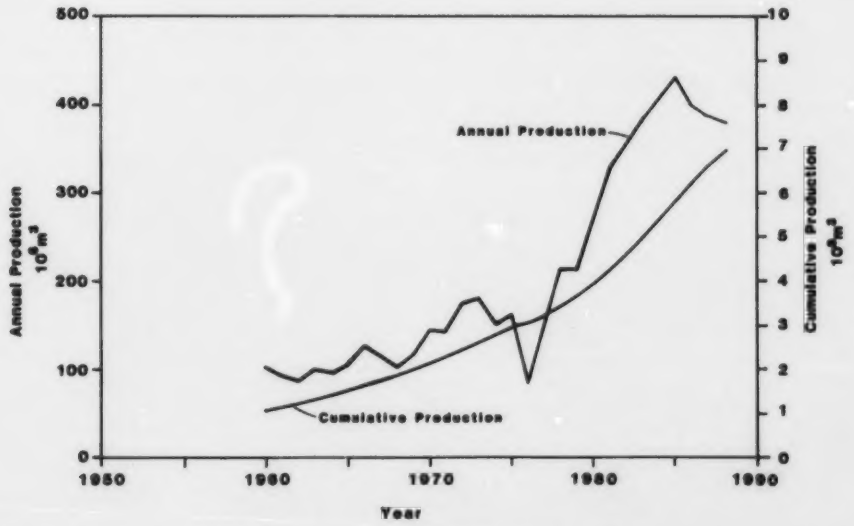

Figure 16. Annual and cumulative gas production from Lake Erie, 1960-1988.

TABLE 17: HISTORICAL GAS PRODUCTION, 1905-1988

Year	Number of Producing GasWells	Gas Production 1000 m3	Aver. Gas Production /Well/Year	Cumulative Production 1000 m3
1905				1258145
1906		71788		1329933
1907		117728		1447661
1908		126994		1574655
1909		152630		1727285
1910		205754		1933039
1911		348770		2281808
1912		352820		2634629
1913		355752		2990381
1914		398369		3388750
1915		430932		3819681
1916		507893		4327574
1917		567305		4894879
1918		370171		5265050
1919		327563		5592613
1920		303938		5896551
1921	1915	241700	126	6138251
1922	1907	242721	127	6380972
1923	2004	230260	115	6611233
1924	2210	208802	94	6820035
1925	2125	205583	97	7025618
1926	2126	220291	104	7245909
1927	2217	207111	93	7453020
1928	2272	216219	95	7669239
1929	2349	243143	104	7912382
1930	2452	225020	92	8137402
1931	2606	210179	81	8347581
1932	2707	209234	77	8556815
1933	2821	203016	72	8759831
1934	2977	217639	73	8977470
1935	3127	231122	74	9208592
1936	3218	283469	88	9492061
1937	3252	304420	94	9796482
1938	3273	310269	95	10106751
1939	3322	338987	102	10445738
1940	3382	369775	109	10815513
1941	3429	335082	98	11150595
1942	3503	296784	85	11447379
1943	3511	224198	64	11671577
1944	3500	200632	57	11872209
1945	3612	203960	56	12076169
1946	3696	199748	54	12275917
1947	3793	220558	58	12496475
1948	3785	243348	64	12739824
1949	3812	227309	60	12967132
1950	3938	226891	58	13194024
1951	3951	239167	61	13433191
1952	3846	235183	61	13668374
1953	NA	278618	NA	13946992
1954	3211	283726	88	14230718
1955	3103	307438	99	14538156
1956	3083	362925	118	14901082
1957	3057	407947	133	15309029
1958	2931	457438	156	15766466
1959	2900	477019	164	16243485
1960	2792	481207	172	16724692
1961	2728	412005	151	17136697
1962	2472	443282	179	17579979
1963	2449	450981	184	18030960
1964	2262	391377	173	18422336
1965	2208	359749	163	18782085
1966	2098	440134	210	19222219
1967	2043	402769	197	19624989
1968	1986	341799	172	19966788
1969	1834	318345	174	20285133
1970	1672	471643	282	20756776
1971	1439	457997	318	21214773
1972	1292	350561	271	21565333
1973	1187	269911	227	21835244
1974	1130	213506	189	22048750
1975	1083	309778	286	22358528
1976	1070	140439	131	22498966
1977	1034	241522	234	22740489
1978	1017	352997	347	23093485
1979	1078	377576	350	23471061
1980	1066	448904	421	23919965
1981	1141	517701	454	24437666
1982	1086	512663	472	24950328
1983	1169	522960	447	25473288
1984	1128	545009	483	26018297
1985	1196	588746	492	26607043
1986	1266	531727	420	27138770
1987	1251	511327	409	27650097
1988	1220	503422	413	28153519

ers in 1988 was $92.96 per thousand m3. Based on this price the total value of Ontario production in 1987 is estimated to be $46.8 million. For comparison, in 1987 the average price paid to Ontario producers was $119.22 per thousand m3 for total revenue of approximately $61.0 million.

Historical data on production of natural gas in Ontario is summarized in Table 16 and 17, and Figures 14 to 16 inclusive. Cumulative production of natural gas in Ontario for the period 1905-1988 totalled 28,153,519 thousand m3.

4. SOURCES OF PRODUCTION AND RESERVOIR DATA IN ONTARIO

The production tables included in this report were compiled utilizing a variety of sources including previous Annual Reports, Oil and Gas Papers, and Open File Reports prepared by Bailey and Cochrane (1984a, b, 1985, 1986, 1990). Bailey and Cochrane (1986) provides a detailed description of the various sources of data available and the problems one encounters when attempting to assemble a production history for any particular pool. The entire section is reprinted here as it is a valuable aid to anyone utilizing production data available in files of the Petroleum Resources Section, Ministry of Natural Resources.

"As a condition for the receipt or renewal of a licence to produce oil and gas in Ontario, the Ontario Ministry of Natural Resources (OMNR) requires the operator to submit annually a tabulation of the oil and gas produced by well and by field for the previous year; OMNR Form 109 is used for gas and Form 108 for oil production. The OMNR also receives annual records of gas purchases by the utilities, primarily, Union Gas Ltd. and Consumers' Gas Co.; and records of oil purchases from the refiners, primarily, Imperial Oil Ltd.

This information is the basis for the production figures published annually by the OMNR in the "Oil and Gas Exploration, Drilling and Production Summary". The annual summary lists the annual production by field, the shut-in pressure for gas wells, the well status, and the annual production for four previous years. The data is generally of good quality and can be used for the construction of pool decline curves.

If more detailed data is required, the Forms 108 and 109 can be reviewed at the OMNR Regional Office on 659 Exeter Road, London, Ontario. Production data can also be found in pool studies submitted by operators to support applications for waterflooding or unitization. In addition, some pool studies and production records have been published in various geological journals.

Details on the initial completion of a well are submitted by the operators on OMNR Form 107, but records of recompletions and workovers are not usually found in the Ministry files. Reservoir data is usually found in pool studies submitted by operators for unitization and waterflooding operations. The OMNR has a good record of crude oil analyses, gas analyses, core analyses, drill stem test data and electrical logs. Unless the field is undergoing secondary recovery, the OMNR has no record of the quantity of water produced in association with the hydrocarbons. When a field is being waterflooded, the operator makes an annual report of the amount of water used during the year and the injection pressure. All data submitted by operators is held in the confidential files for one year.

The format of the reports completed by the operators for submission to the Ministry has changed over the years. The OMNR has records of operator's submissions for gas wells back to the year 1943 and has records for oil wells back to 1954. Although there is some gas production data submitted by operators for previous years, the first year of continuous reporting in the OMNR files is 1943. From 1943 to 1953, the form used by the operators was called "Report of Mineral Production for the use of the Ontario Department of Mines, Toronto and the Dominion Bureau of Statistics, Ottawa". Unfortunately, on this form, the gas producer did not describe the actual location of the wells in any more detail than by county and township.

In the period 1954 to 1959, the form became "Form 15, Ontario Fuel Board Act, 1954, Annual Report by Person Producing, Storing, Transmitting or Distributing Natural Gas". Gas". The form evolved into "Ontario Department of Energy Resources Form 503" in the period 1960 to 1963, and the Energy Act 1964 Form 401" from, 1964 to 1966. In 1967 the form was revised once again and, in 1968, it became the Form 109 which is still in use at this time.

For oil production, the first year of continuous reporting is 1954, and from that year to 1959, the form was called "Form 14 Ontario Fuel Board Act". It became "Form 502 Ontario Department of Energy Resources" from 1960 to 1963 and then "Form 108 Energy Act 1964" from 1964 to 1966. Form 108 was revised in 1967 and is presently in use at this time, although conversion to metric units became effective in 1979.

Some comments on the data quality are warranted. Production data derived from various sources always contains discrepancies. In the case of oil production, some operators provide pool production data while others provide sales data or a mixture of both. The oil purchaser reports the quantity of oil received at his terminal but actually pays for that quantity of oil reduced by a factor to account for the basic sediments and water content. Other than an annoyance factor, the differences in production data arising from these cause some problems in reserve estimates for marginal wells, especially if large quantities of water are being produced.

In the case of gas production data, discrepancies occur mainly because of the different pressure bases used in the gas purchase contracts. Also, if the operator and the purchaser meter the gas separately, there is invariably a difference in the measurements. In cases where one operator produces gas from a number of wells, either in the same pool or from separate pools, the gas production is occasionally commingled and it is difficult to determine the quantity of gas produced by each well or pool. Pressure data for gas wells is usually measured at the wellhead and must be used cautiously whenever fluid could be contained in the well bore.

Typing errors, misprints and misinterpretations of the type of data requested are common in Forms 108 and 109; it is obvious that some of the forms were completed by persons not familiar with oil and gas production.

If a pool has not been unitized or was unitized after a period of production, it becomes a challenge to assemble all of the production data submitted by the various operators, correlate it and combine it into the field cumulative. The problem is compounded when one operator sells all or part of his interest to another party. Willey Pool, Elgin County, was such a case. The published production data was broken down into its components and then reassembled to result in the appearance of production data for four smaller pools, separated from the main Willey Pool.

The oil industry originated in southwestern Ontario, and as a result, the production information for the older fields is not always available or reliable. Some of this production data is published in technical papers but the best data source for the older fields is the OMNR Annual Natural Gas and Petroleum Reports. Most of the data in these reports must be accepted at face value because of the absence of supporting documents. When two sources of published information conflict, judgement must be used in selecting the appropriate data to be used for reserve calculations".

VII. Natural Gas Storage

Sixteen of the nineteen designated gas storage pools were in operation in 1988. Total gas storage working capacity when delta pressured in 1988 was approximately 5090.8 million cubic metres. The "working capacity" of the storage pools is the reservoir volume available for injection and withdrawal of gas from the reservoir between the maximum delta pressure and the cushion pressure. In most cases the cushion pressure of storage reservoirs in Ontario is approximately 2413 kPa (reservoir pressure). Lambton County remained the centre for gas storage operations, with all but one of the active pools contained within its boundaries.

Gas storage statistics have been updated as of October 1, 1988 and are presented in Table 18. Storage capacities in the Payne, Bickford, and Terminus pools have increased since 1985 due to increased delta pressuring of these pools. The Moore 3-21-XII pool was designated for natural gas storage by the Ontario Energy Board in 1988, bringing the total number of designated storage pools to nineteen. Total gas storage working capacity as of October 31, 1988 was 5090.8 million m3.

TABLE 18: NATURAL GAS STORAGE

Reservoir	Formation[1]	Status	Operator	Total Gas -In-Place When Delta Pressured 10^3m^3	Working Capacity When Delta Pressured 10^3m^3	Reservoir Pressure When Delta Pressured kPag	Original Reservoir Pressure kPag
Bentpath	G, A-1	Active	Union	183.0	125.9	6916	5981
Bickford	G, A-1	Active	Union	727.1	539.8	7612	6398
Corunna	G, A-1	Active	Tecumseh	NA	138.8	7964	6502
Crowland	Whirlpool	Active	Consumers'	NA	14.2	4330	3447
Dawn 156	G, A-1	Active	Union	870.5	591.5	6757	6047
Dawn 167	G, A-1	Active	Union	200.9	101.2	6592	6247
Dawn 47-49	G, A-1	Active	Union	163.0	110.7	6757	5964
Dawn 59-85	G, A-1	Active	Union	260.5	138.5	6757	5964
Moore 3-21-XII	G, A-1	Active	Tecumseh,Union	676.8	563.6	7585	6412
Enniskillen 28	G	Inactive	Union	115.6	NA	7819	5288
Kimball-Colin.	G, A-1	Active	Tecumseh	NA	1019.8	7964	6336
Payne	G, A-1	Active	Union	833.7	635.6	8219	6047
Rosedale	G, A-1	Active	Union	109.6	75.6	6957	6460
Seckerton	G, A-1	Active	Tecumseh	NA	320.1	7964	6481
Sombra	G, A-1	Inactive	Union	71.2	NA	7612	6467
Terminus	G, A-1	Active	Union	400.1	277.5	6757	6109
Waubuno	G, A-1	Active	Union	328.9	245.4	6757	6419
Wilkesport	G, A-1	Active	Tecumseh	NA	192.6	7929	6378
Zone	A-1, A-2	Inactive	Union	146.1	NA	7129	4971

Total Active Working Capacity = 5090.8 million m3

1. G = Guelph, A-1 = A-1 Carbonate, A-2 = A-2 Carbonate
Statistics are accurate as of October 1, 1988.

VIII. Salt Cavern Storage

Table 19 provides a summary of salt cavern storage operations in southwestern Ontario. Statistics were compiled from a survey of the companies involved by the Petroleum Resources Section, and are up-to-date as of October 31, 1988.

TABLE 19: SALT CAVERN STORAGE

Company Name	Cavern Number	Capacity (m3)	Contents
Amoco Canada (Sarnia)	RP-1	19,237	NGL mix
	RP-2	20,350	NGL mix
	RP-3	28,618	NGL mix
	RP-4	58,825	NGL mix
	RP-5	32,751	NGL mix
	RP-6	50,240	NGL mix
	RP-7	63,595	NGL mix
	P-1	62,800	Spec LPG
	P-2	61,200	Spec LPG
	P-3	73,930	Spec LPG
	P-4	55,170	Spec LPG
	P-5	66,770	Spec LPG
	P-6	64,230	Spec LPG
	P-7	45,310	Spec LPG
	P-8	45,310	Spec LPG
	B-1	110,650	Spec LPG
	B-2	24,960	Spec LPG
	B-3	72,970	Spec LPG
	B-4	57,710	Spec LPG
Total	19	1,023,626	
Amoco Canada (Windsor)	E-1	61,210	Ethane
	E-3	50,560	Propane
	E-5	41,340	Ethane/Ethylene
	I-4	12,720	Butane
	32/33	397,500	NGL
	34	12,100	Empty
	35	81,000	Propane
	B-7	47,700	Butane
	P-8	54,850	Butane
Total	8 active	746,880	
	1 inactive	12,100	
Dow Chemical Canada	HC-1	42,340	Ethylene
	HC-2	9,197	Oil
	HC-3	58,673	Ethylene
	HC-4	44,243	Ethylene
	HC-5	36,155	Ethylene
	HC-6	31,239	Ethylene
	HC-7	126,987	Brine
	HC-8	19,188	Propylene
	HC-9	39,386	Brine
	HC-10	52,262	Brine
	HC-11	21,409	Brine
	HC-12	17,746	Brine
	41-42	557,587	Inactive
	43-44	472,340	Inactive
	45-46	313,173	Brine
	47-48	712,789	Inactive
	49-50	171,354	Ethylene
	51-52	79,718	Ethylene
	53-54	616,661	Observation
	55	57,073	Observation
	56	74,062	Butane
	57-58	331,059	Brine
	59-60	254,387	Propane
	61	91,940	Brine
	62	122,907	Brine
	63-64	4,072	Brine
	65-66	119,732	Brine
	67-68	81,173	Brine
	69	61,236	Brine
	70	47,266	Brine
	71-72	34,535	Brine
	73	7,930	Brine
	75	47,249	Brine
	76	23,919	Brine
	77	7,870	Brine
Dow Chemical Canada	78	8,079	Brine
	79	7,745	Brine
	81	24,608	Brine
	82	23,732	Brine
	83	19,724	Brine
	84	19,354	Brine
	85	17,332	Brine
Total	11 active	820,556	
	26 brine	1,672,425	
	3 inactive	1,811,558	
	2 observ	673,734	
Imperial Oil Ltd.	C-982	39,747	Ethane/Propane
-Esso Petroleum	C-981	28,618	Empty
-Esso Chemical	C-985	20,668	LPG
	C-4040	33,387	Iso-Butane
	C-4043	41,337	n-Butane
	C-4044	34,997	Propane
	C-983	31,797	Fuel Gas
	C-4041	21,463	Propylene
	C-4042	38,316	Ethylene
Total	8 active	261,692	
	1 inactive	28,618	
Petrosar	1	39,680	Ethylene
	2	61,626	Ethylene
	3	15,700	Fuel Gas
	4	42,900	Propylene
	5	17,900	Propane
	6	23,848	Empty
Total	5 active	177,806	
	1 inactive	23,848	
Polysar Ltd.	1	31,000	Butylene
	2	17,000	Butylene
	3	18,000	Butylene
	4	16,700	Butylene
	5	21,400	Isobutylene
	7	12,600	Butylene
Total	6	116,700	
Shell Canada Ltd.	W-1	33,400	Butane
	W-2	23,200	Butane
	W-3	15,400	Propylene
	W-4	5,500	Propylene
Total	4	77,500	
Sun Oil Ltd.	3	22,894	Pentanes/Hexanes
	4	19,873	Propane
	5	34,570	Butane
	7	11,420	Butane/Butylene
	8	16,376	Inactive
	9	36,090	LPG Mixture
	10	16,853	LPG Mixture
	13	14,547	LPG Mixture
	14	16,025	Iso-butane
Total	8 active	172,272	
	1 inactive	16,376	
TOTAL	69 active	3,387,032	
	26 brine	1,672,425	
	9 inactive	1,823,658	
	2 observ	673,734	

Data current as of October 31, 1988.

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Appendix I.
Licences Issued in 1988

TABLE I-1: PERSONS LICENCED TO LEASE OIL OR GAS RIGHTS, 1988.

Licencee	City/Province	Licence #
398311 Ontario Limited	Corunna, Ontario	00001L88
672564 Ontario Limited	Toronto, Ontario	00963L88
Adanac Oil & Gas Limited	Calgary, Alberta	00010L88
Avonry Gas Company Limited	Petrolia, Ontario	00026L88
B.G. Environmental Surveys Limited	Rexdale, Ontario	00033L88
B.P. Resources Canada Limited	Calgary, Alberta	00034L88
Baker. J.W.	Brigden, Ontario	00038L88
Barnes, Joyce	Wyoming, Ontario	00044L88
Barnes, Kenneth	Wyoming, Ontario	00045L88
Bayview Explorations Ltd.	St. Williams, Ontario	00049L88
Beach, Percy J.	St. Catharines, Ontario	00051L88
Bear Creek Resources Limited	Toronto, Ontario	00052L88
Bluewater Oil & Gas Limited	Calgary, Alberta	00074L88
Bogaert, Michael P.	Brigden, Ontario	00078L88
Bonhomme, J.C.	Toronto, Ontario	00079L88
Bowes, Paul	London, Ontario	00087L88
Bowrio Resources Ltd.	Calgary, Alberta	00962L88
Boyce, Paul F.	London, Ontario	00088L88
Boychuk, Leonard J.	London, Ontario	00089L88
Brightwest Resource Explorations Ltd.	Rexdale, Ontario	01006L88
Burgess, D. Bryan	Chatham, Ontario	00097L88
Burt, Ross	Orangeville, Ontario	00098L88
C.D. Fraser Land Services Limited	Lambeth, Ontario	00103L88
Cairnlins Petroleum Services	Komoka, Ontario	00107L88
Cameron Petroleums Limited	Lambeth, Ontario	00113L88
Campbell, Keith	Merlin, Ontario	00115L88
Campbell, Paul	London, Ontario	00982L88
Canadian Occidental Petroleum Ltd.	Calgary, Alberta	00120L88
Canex Petroleum Incorporated	Rexdale, Ontario	00750L88
Carey, Stephen	Port Rowan, Ontario	01019L88
Carnegie, Donald	Inwood, Ontario	00789L88
Central Explorers Inc.	Calgary, Alberta	00018L88
Chatham Resources Ltd.	Hamilton, Ontario	00139L88
Chemical Projects Limited	Rexdale, Ontario	00142L88
Chupa, Terry	London, Ontario	00144L88
Coldicott, W.J.	Scarborough, Ontario	00150L88
Colonial Petroleums Limited	London, Ontario	00151L88
Consolidated West Petroleum Limited	Port Colborne, Ontario	00156L88
Craven Oil Company Limited, Inc.	Lubbock, Texas	00162L88
D.A. Wilson Land Services Ltd.	London, Ontario	01000L88
Dekker, Clarence	Chatham, Ontario	00181L88
Devran Petroleum Ltd.	London, Ontario	00186L88
Dome Petdroleum Limited	Calgary, Alberta	00196L88
Dow Chemical Canada Inc.	Sarnia, Ontario	00209L88
Duffield, Charles	London, Ontario	00998L88
Dunlop, Roberta L.	Chatham, Ontario	00990L88
Easton, Douglas	Exeter, Ontario	00223L88
Elexco Ltd.	London, Ontario	00227L88
Elliott, C. Bruce	Grand Bend, Ontario	00966L88
Essex Oil Explorations Inc.	Amherstberg, Ontario	00749L88
Esso Resources Canada Ltd.	Blenheim, Ontario	00238L88
F & M Resources Ltd.	Langton, Ontario	00243L88
Fagan, Steve	London, Ontario	00752L88

TABLE I-1: Continued

Licencee	City/Province	Licence #
Farmer's Oil & Gas Inc.	Wheatley, Ontario	00890L88
Filipetti, Terry M.	London, Ontario	00254L88
Fitzgerald, Norman D.	Abilene, Texas	00257L88
Ford, Harvey	Sarnia, Ontario	00263L88
Fox, E.S.	Welland, Ontario	00265L88
Francisco Petroleum Enterprises Inc.	Chatham, Ontario	00267L88
French, Bradley W.	Chatham, Ontario	00272L88
Fyck, Rick	Grand Bend, Ontario	00275L88
Gaiswinkler Enterprises Ltd.	Chatham, Ontario	00278L88
Gaiswinkler, Leo F.	Chatham, Ontario	00280L88
Glenfred Gas Wells Limited	Jarvis, Ontario	00288L88
H. Brett & Associates Limited	Lambeth, Ontario	00305L88
Hall, Leslie	Brigden, Ontario	00313L88
Harrison, Geoffrey G.	London, Ontario	00938L88
Hemlock Explorations Limited	Langton, Ontario	00321L88
Herlufsen, Bent E.	London, Ontario	00325L88
Herman, L.T.	Mississauga, Ontario	00970L88
Highridge Exploration Ltd.	Calgary, Alberta	00328L88
Intrex Corporation	Lambeth, Ontario	00342L88
Inwood, R.	London, Ontario	00344L88
Johnson, Jeff	London, Ontario	00355L88
Johnson, R.D.	London, Ontario	00356L88
Johnstone, James	Windsor, Ontario	00359L88
Judo Resources Inc.	London, Ontario	00901L88
K.E. Crawford Limited	Chatham, Ontario	00362L88
Kenartha Oil & Gas Co. Ltd.	Toronto, Ontario	00366L88
Klenk, William C.	Manitowaning, Ontario	00376L88
Kriter, Robert E.	Lambeth, Ontario	00384L88
Lakewood IV Limited Partnership	Montreal, Quebec	01011L88
Lancaster, Joe	London, Ontario	00391L88
Malo, J.	Chatham, Ontario	00404L88
Martin, Chico Hamilton	Grand Bend, Ontario	01002L88
Marvan II	Thamesville, Ontario	00412L88
McKenzie, D. Ian	Waterloo, Ontario	00419L88
McKenzie, D.F.	Sarnia, Ontario	00420L88
McKenzie, Dr. Garry D.	Columbus, Ohio	00421L88
McLachlin, D.A.	Wallaceburg, Ontario	00423L88
Metalore Resources Ltd	Vittoria, Ontario	00428L88
Michigan Oil Company	Jackson, Michigan	00430L88
Mickle, William Paul	London, Ontario	00433L88
Mid Eastern Oil & Gas Limited	London, Ontario	00434L88
Midway Petroleum Company	Clarkston, Michigan	00753L88
Milton Resources Limited	London, Ontario	00437L88
Mitchell Energy Corporation	Columbus, Ohio	00445L88
Mitchell, Philip	London, Ontario	00450L88
Moore, Bert	Markham, Ontario	00453L88
Morey, Terry C.	Calgary, Alberta	00999L88
Morrison, Robert J.	Langton, Ontario	00460L88
NB Energy, A Division of the Northland Bank in Liquidation	Calgary, Alberta	00997L88
Newport, Lorne T.	Wardsville, Ontario	00473L88
Norman, Dale	London, Ontario	00479L88
Norman, J.L.	London, Ontario	00480L88
Northern Cross Resources Ltd	Toronto, Ontario	00975L88
Oil Field Services	Mooretown, Ontario	00481L88
Opco Management Ltd.	Rexdale, Ontario	01010L88
PPC Oil & Gas Corp.	London, Ontario	00493L88
PanCanadian Petroleum Limited	Calgary, Alberta	00496L88

TABLE I-1: Continued

Licencee	City/Province	Licence #
Patterson Oil Development	Erieau, Ontario	00498L88
Pembina Exploration Limited	Port Colborne, Ontario	00504L88
Perma Energy Ltd.	London, Ontario	01001L88
Philon Energy Inc.	Chatham, Ontario	00900L88
Pinetree Explorations Limited	Toronto, Ontario	00515L88
Pinnacle Developments Inc.	Concord, Ontario	01013L88
Pinnacle Exploration Ltd.	Chatham, Ontario	00980L88
Polysteel Building Systems Ltd.	Toronto, Ontario	00202L88
Putman, Patricia S.	Sarnia, Ontario	00528L88
R.G. Bryant Energy Associates Inc.	London, Ontario	00530L88
Raen Petroleum Corp.	London, Ontario	00532L88
Ram Petroleums Limited	London, Ontario	00535L88
Rawlings, F.S.	Chatham, Ontario	00540L88
Realoil Enterprises Limited	Chatham, Ontario	00543L88
Reid, Orin	Cambridge, Ontario	00983L88
Reid, Richard Kenneth	Dutton, Ontario	00547L88
Richards, G.W.	London, Ontario	00552L88
Rife, K.C.	Cambridge, Ontario	00556L88
Robins, Glenn	Dunnville, Ontario	00558L88
Robinson, Randy J.	Wheatley, Ontario	00889L88
Ron Smith Well Drilling Ltd.	Denfield, Ontario	00560L88
Rose Drilling Enterprises Inc.	Walsingham, Ontario	00466L88
Rowe, J.M.	Mt. Brydges, Ontario	00566L88
Rowe, Peter E.	London, Ontario	00567L88
Saskatchewan Oil and Gas Corp.	Calgary, Alberta	01020L88
Senex Petroleum Corp.	Calgary, Alberta	01047L88
Shell Canada Limited	Calgary, Alberta	00591L88
Sidasa Petroleums Limited	Kitchener, Ontario	00593L88
Spelman-Prentice	Casper, Wyoming	00604L88
Stevenson, James R.	Grand Bend, Ontario	00902L88
Studnicka, J.L.	Chatham, Ontario	00977L88
Sunburst Oil Company	Lambeth, Ontario	00617L88
Sungold Resources Inc.	Rexdale, Ontario	01007L88
Sussex Explorations Limited	London, Ontario	00619L88
Sylab Incorporated	Petrolia, Ontario	00620L88
Talcorp Services Limited	Toronto, Ontario	00623L88
The Combined Larder Mines Limited	Guelph, Ontario	00888L88
The Consumers' Gas Company	London, Ontario	00631L88
Thomas, Douglas W.	Port Elgin, Ontario	00978L88
Torgary Resources Inc.	Calgary, Alberta	01005L88
Underground Storage Ltd.	Chatham, Ontario	01003L88
Union Gas Limited	Chatham, Ontario	00644L88
Vye, Frank	Petrolia, Ontario	00657L88
Wassman, Steven C.	St. Clair, Michigan	00663L88
Wellandport Gas Company	Dunnville, Ontario	00665L88
Wilson, Alexander D.	London, Ontario	00673L88
Wilton, B.	Blenheim, Ontario	00674L88
Wilton, Harold R.	Blenheim, Ontario	00675L88
Woodcock, P.	Chatham, Ontario	00676L88

TABLE I-2: PERSONS LICENCED TO CONDUCT GEOPHYSICAL OR GEOCHEMICAL EXPLORATION FOR OIL AND GAS, 1988.

Licencee	City/Province	Licence #
B.G. Environmental Surveys Limited	Rexdale, Ontario	00033G88
B.P. Resources Canada Limited	Calgary, Alberta	00034G88
Bluewater Oil & Gas Limited	Calgary, Alberta	00074G88
Bowrio Resources Ltd.	Calgary, Alberta	00962G88
Brightwest Resource Explorations Inc	Rexdale, Ontario	01006G88
Cairnlins Petroleum Services	Komoka, Ontario	00107G88
Cameron Petroleums Limited	London, Ontario	00113G88
Canadian Occidental Petroleum Ltd.	Calgary, Alberta	00120G88
Canex Petroleum Incorporated	Rexdale, Ontario	00750G88
Cangeo Limited	Oil Springs, Ontario	00124G88
Chemical Projects Limited	Rexdale, Ontario	00142G88
Colonial Petroleums Limited	London, Ontario	00151G88
Consolidated Explorer Petroleum Corp.	Calgary, Alberta	00154G88
Devran Petroleum Ltd.	London, Ontario	00186G88
Durl Hopper Limited	Seaforth, Ontario	00212G88
Ecoseis Exploration Ltd.	Lambeth, Ontario	00224G88
Elexco Ltd.	London, Ontario	00227G88
Farmer's Oil & Gas Inc	Wheatley, Ontario	00890G88
Fitzgerald, Norman D.	Abilene, Texas	00257G88
Francisco Petroleum Enterprises Inc.	Chatham, Ontario	00267G88
Gaiswinkler Enterprises Inc.	Chatham, Ontario	00278G88
GraviMetrics Inc.	Tulsa, Oklahoma	00299G88
Highridge Exploration Ltd	Calgary, Alberta	00328G88
Judo Resources Inc.	London, Ontario	00901G88
Lakewood IV Limited Partnership	Montreal, Quebec	01011G88
Klenk, William C. III	Manitowaning, Ontario	00376G88
Malahide Petroleum Corporation	London, Ontario	01015G88
Michigan Oil Company	Jackson, Michigan	00430G88
Midway Petroleum Company	Clarkston, Michigan	00753G88
Milton Resources Limited	London, Ontario	00437G88
Mitchell Energy Corporation	Columbus, Ohio	00445G88
PPC Oil & Gas Corp.	London, Ontario	00493G88
Pembina Exploration Limited	Port Colborne, Ontario	00504G88
Philon Energy Inc	Chatham, Ontario	00900G88
Phoenix Geophysics Limited	Unionville, Ontario	00899G88
Pinnacle Exploration Ltd	Chatham, Ontario	00980G88
Raen Petroleum Corp.	London, Ontario	00532G88
Ram Petroleums Limited	London, Ontario	00535G88
Quenneville, Roger	Wheatley, Ontario	01014G88
Reid, Orin	Cambridge, Ontario	00983G88
Saskatchewan Oil and Gas Corporation	Calgary, Alberta	01020G88
Sonics Exploration Ltd.	Calgary, Alberta	00976G88
Spelman Prentice	Casper, Wyoming	00604G88
Sungold Resources Inc.	Rexdale, Ontario	01007G88
The Combined Larder Mines Limited	Guelph, Ontario	00888G88
The Consumers' Gas Company Ltd.	London, Ontario	00631G88
Union Gas Limited	Chatham, Ontario	00644G88
W.T. Chatham Associates Ltd.	Hamilton, Ontario	00658G88
Walking Stick Oil & Gas Ltd.	Calgary, Alberta	00058G88

TABLE I-3: OWNERS OF LICENCED MACHINES FOR BORING, DRILLING, OR PLUGGING WELLS, 1988

Licencee	City\Province	Licence #
398311 Ontario Limited	Corunna	00001M8801
676577 Ontario Ltd.	Manitowaning	00756M8801
723582 Ontario Ltd.	Sarnia	00995M8801
839040 Ontario Inc.	Petrolia	00062M8801
B & S Rotary Drilling Ltd.	Corunna	00032M8801
Bothwell Drilling & Servicing Ltd.	Lambeth	00084M8801
		00084M8802
Charles G. Stevenson Drilling Ltd.	Dresden	00134M8801
		00134M8802
Charles Shaw Drilling Ltd.	Florence	00135M8801
		00135M8802
		00135M8803
		00135M8804
Chatham Engineering Ltd.	Hamilton	00988M8801
Corunna Drilling Limited	Corunna	00161M8801
		00161M8802
D.S.I.L. Drilling Inc.	Scarborough	00170M8801
Davidson Well Drilling Limited	Wingham	00175M8801
DeGrow, Leland M.	York	00178M8801
Eagle Drilling services Inc.	Chatham	00220M8801
Francisco Petroleum Enterprises Inc	Chatham	00267M8801
Glencoe Waterflood Inc.	Glencoe	00286M8801
Groundation Engineering Contractors Inc.	Georgetown	01009M8801
Instant Water Wells Ltd.	Williamsburg	00340M8801
James Newport Drilling Limited	Oil Springs	00352M8801
		00352M8802
Kenneth J. Girard Drilling	Wardsville	00370M8801
Longyear Canada Inc.	Concord	00399M8801
		00399M8802
		00399M8803
Mitchell, Elgin	Simcoe	01018M8801
		01018M8802
		01018M8803
Moershfelder, Fred	Fisherville	01004M8801
Montgmery Bros.	Selkirk	00452M8801
Morningstar Oil Producers Ltd.	Oil Springs	00456M8801
Rose Drilling Enterprises Inc.	Walsingham	00466M8801
Newport, Lorne T.	Wardsville	00473M8801
		00473M8802
		00473M8803
Pembina Resources Limited	Port Colborne	00507M8801
		00507M8802
Place Resources Corporation	Calgary	00516M8801
		00516M8802
Rawlings Drilling Company Limited	Chatham	00538M8801
		00538M8802
		00538M8803
		00538M8804
		00538M8805
		00538M8806
Red Rig Oilwell Servicing Ltd.	Sombra	00545M8801
		00545M8802
		00545M8803
		00545M8804

TABLE I-3: Continued

Licencee	City\Province	Licence #
Ron Smith Well Drilling Ltd.	Denfield	00560M8801
		00560M8802
		00560M8803
Rose, Charles	Bothwell	00563M8801
Stewart Well Drilling	Jarvis	00615M8801
Underwater Gas Developers Ltd.	London	00643M8801
		00643M8802
		00643M8803
		00643M8804
		00643M8805
		00643M8807
Union Gas Ltd.	Chatham	00644M8801
Vye, Frank	Petrolia	00657M8801

TABLE I-4: PERSONS LICENCED TO PRODUCE OIL AND GAS, 1988.

Licencee	City\Province	Licence #
398311 Ontario Limited	Corunna, Ontario	00001P88
490960 Ontario Limited	Petrolia, Ontario	00004P88
625052 Ontario Limited	Petrolia, Ontario	00005P88
625138 Ontario Limited	Sarnia, Ontario	00006P88
839040 Ontario Inc.	Petrolia, Ontario	00062P88
Adanac Oil & Gas Limited	Calgary, Alberta	00010P88
Annett, Robert M.	Bothwell, Ontario	00017P88
Avonry Gas Company Limited	Petrolia, Ontario	00026P88
Ayrheart, Eva	Oil Springs, Ontario	00028P88
Ayrheart, Roy	Petrolia, Ontario	00031P88
Baldwin, David L.	Sarnia, Ontario	00040P88
Barnes, Lonnie	Oil Springs, Ontario	00046P88
Bayview Explorations Ltd.	St. Williams, Ontario	00049P88
Bear Creek Resources Limited	Toronto, Ontario	00052P88
Bluewater Oil & Gas Limited	Calgary, Alberta	00074P88
Bradley, Murray	Petrolia, Ontario	00091P88
Bradley, Richard	Petrolia, Ontario	00092P88
Brand, Walt	Petrolia, Ontario	00093P88
Brookwood Oils Inc.	London, Ontario	00096P88
Byers, I.	Oil Springs	00102P88
Cairnlins Petroleum Services	Komoka, Ontario	00107P88
Cameron Petroleums Limited	Lambeth, Ontario	00113P88
Canadian Occidental Petroleum Ltd.	Calgary, Alberta	00120P88
Can-Gas Resources	Vittoria, Ontario	00964P88
Cartier Resources Inc.	Toronto, Ontario	00128P88
Charles Fairbank Oil Prop.	Petrolia, Ontario	00133P88
Chatham Resources Limited	Hamilton, Ontario	00139P88
Colonial Petroleums Limited	London, Ontario	00151P88
Conisil Resources Inc.	Toronto, Ontario	01017P88
Consolidated Explorer Petroleum Corp.	Calgary, Alberta	00154P88
Consolidated West Petroleum Limited	Port Colborne, Ontario	00156P88
Corden, Bruce	St. Clair, Michigan	00159P88
Craven Oil Company Limited	Lubbock, Texas	00162P88
Crich Holdings and Buildings Limited	London, Ontario	00878P88
D.W. Matheson Electric Ltd.	Oil Springs, Ontario	00171P88
Delta Explorations Inc.	London, Ontario	01008P88
Den-Mar Brines Limited	Bothwell, Ontario	00182P88
Devran Petroleum Ltd.	London, Ontario	00186P88
Donald, A.B., Helen	Oil Springs, Ontario	00989P88
Dow Chemical Canada Inc.	Sarnia, Ontario	00209P88
Edward, R.A.	Petrolia, Ontario	00225P88
Esso Resources Canada Ltd.	Blenheim, Ontario	00238P88
F & M Resources Ltd.	Langton, Ontario	00243P88
Farmer's Oil & Gas Inc.	Wheatley, Ontario	00890P88
Farrants, Robert A.	Thamesville, Ontario	00247P88
Fernlea Flowers Limited	Delhi, Ontario	00252P88
Fisherville Gas Limited	Hamilton, Ontario	00256P88
Forbes Resources Inc.	London, Ontario	00261P88
Fox, E.S.	Welland, Ontario	00265P88
Francisco Petroleum Enterprises Inc.	Chatham, Ontario	00267P88
Freeman, Donald G.	Port Rowan, Ontario	00271P88
G.W. Clark Oil & Gas Company	Lambeth, Ontario	00276P88
Gaiswinkler Enterprises Ltd.	Chatham, Ontario	00278P88
George, Eugene	Fort Erie, Ontario	00968P88
George Hyslop Limited	Oshweken, Ontario	00284P88
Glencoe Waterflood Inc.	Glencoe, Ontario	00286P88
Glenfred Gas Wells Limited	Jarvis, Ontario	00288P88
Golden Hubris Inc.	London, Ontario	00292P88

TABLE I-4: Continued

Licencee	City\Province	Licence #
H. Brett & Associates Limited	Lambeth, Ontario	00305P88
Hemlock Explorations Limited	Langton, Ontario	00321P88
Intrex Corporation	Lambeth, Ontario	00342P88
J.W.K. Administration & Associates Ltd.	Brantford, Ontario	00348P88
Johnston, Ross	Oil Springs, Ontario	00357P88
Jourika Gas	Tillsonburg, Ontario	00361P88
Judo Resources Inc.	London, Ontario	00901P88
K.E. Crawford Limited	Chatham, Ontario	00362P88
Kenartha Oil & Gas Co. Ltd.	Toronto, Ontario	00366P88
Kersey, Donald	Oil Springs, Ontario	00971P88
Klenk, William C. III	Manitowaning, Ontario	00376P88
Kodyen, L.M.	Dresden, Ontario	00380P88
LMG Oils Limited	London, Ontario	00385P88
Lakewood IV Limited Partnership	Montreal, Quebec	01011P88
Lambton Area Industries Ltd.	Petrolia, Ontario	00388P88
Lincoln Natural Gas Ltd.	Wainfleet, Ontario	00394P88
Lyons, Wilson & Baines Oil Producers	Petrolia, Ontario	00401P88
Marr, Harvey	Wainfleet, Ontario	00406P88
Marvan II	Thamesville, Ontario	00412P88
Metalore Resources Limited	Vittoria, Ontario	00428P88
Michigan Oil Company	Jackson, Michigan	00430P88
Midway Petroleum Company	Clarkston, Michigan	00753P88
Milton Resources Limited	London, Ontario	00437P88
Mitchell Energy Corporation	Columbus, Ohio	00445P88
Mitchell, Gerald	Oil Springs, Ontario	00448P88
Morningstar Oil Producers Ltd.	Oil Springs, Ontario	00456P88
Morningstar, Lorna	Oil Springs, Ontario	00457P88
Morrison, Doris	Langton, Ontario	00459P88
Morrison, Robert J.	Langton, Ontario	00460P88
Murphy Oil Co. Ltd.	Wallaceburg, Ontario	00463P88
Natural Resource Gas Limited	London, Ontario	00471P88
NB Energy, A Division of the Northland Bank in Liquidation	Calgary, Alberta	00997P88
Nith River Petroleums Ltd.	Cambridge, Ontario	00474P88
Northern Cross Resources Ltd.	Toronto, Ontario	00975P88
Northquest Ventures Inc.	Toronto, Ontario	00726P88
Oil Field Services	Mooretown, Ontario	00481P88
Oilfinders' Group	Lambeth, Ontario	00483P88
Ort, C.H.	Niagara Falls, Ontario	00489P88
PPC Oil & Gas Corp.	London, Ontario	00493P88
Patterson Oil Development	Erieau, Ontario	00498P88
Pegg, Leonard A.	Morpeth, Ontario	00503P88
Pembina Exploration Limited	Port Colborne, Ontario	00504P88
Penway Explorers Ltd.	Toronto, Ontario	00898P88
Perma Energy Ltd.	London, Ontario	01001P88
Petrolia Discovery Foundation Inc.	Petrolia, Ontario	00510P88
Philon Energy Inc.	Chatham, Ontario	00900P88
Pinnacle Developments Inc.	Concord, Ontario	01013P88
Pinnacle Exploration Ltd.	Chatham, Ontario	00980P88
Place Resources Corporation	Calgary, Alberta	00516P88
Polysteel Building Systems Ltd.	Toronto, Ontario	00202P88
Pope, William	Bothwell, Ontario	00522P88
Proto-Resources and Associates	Brampton, Ontario	00525P88
Putman, Patricia S.	Sarnia, Ontario	00526P88
R.G. Bryant Energy Associates	London, Ontario	00530P88
Raen Petroleum Corp.	London, Ontario	00532P88
Ram Petroleums Limited	London, Ontario	00535P88
Rayrock Yellowknife Resources Inc.	Chatham, Ontario	00542P88

TABLE I-4: Continued

Licencee	City\Province	Licence #
Realoil Enterprises Limited	Chatham, Ontario	00543P88
Riddell-Hanna Exploration Limited	West Bloomfield, Michigan	00555P88
Robins, Glenn	Dunnville, Ontario	00558P88
Roth and Roth Limited	Bothwell, Ontario	00564P88
S&W Oil Company	Watford, Ontario	00570P88
Saskatchewan Oil and Gas Corp.	Calgary, Alberta	01020P88
Senex Petroleum Corp.	Calgary, Alberta	01047P88
Sunburst Oil Company	Lambeth, Ontario	00617P88
Sussex Explorations Limited	London, Ontario	00619P88
Sylab Incorporated	Petrolia, Ontario	00620P88
Talcorp Services Limited	Toronto, Ontario	00623P88
The Combined Larder Mines Limited	Guelph, Ontario	00888P88
The Consumers' Gas Company Ltd.	London, Ontario	00631P88
Underground Storage Ltd.	Chatham, Ontario	01003P88
Union Gas Limited	Chatham, Ontario	00644P88
Vye, Frank	Petrolia, Ontario	00657P88
Walking Stick Oil & Gas Ltd.	Calgary, Alberta	00058P88
Wellandport Gas Company	Dunnville, Ontario	00665P88
Woods, Lloyd	Oil Springs, Ontario	00677P88
York Producing Co. Ltd.	Bolivar, New York	00678P88
Zdriluk, Albert M.	Waterford, Ontario	00681P88

Appendix II
Composite Stratigraphic Column

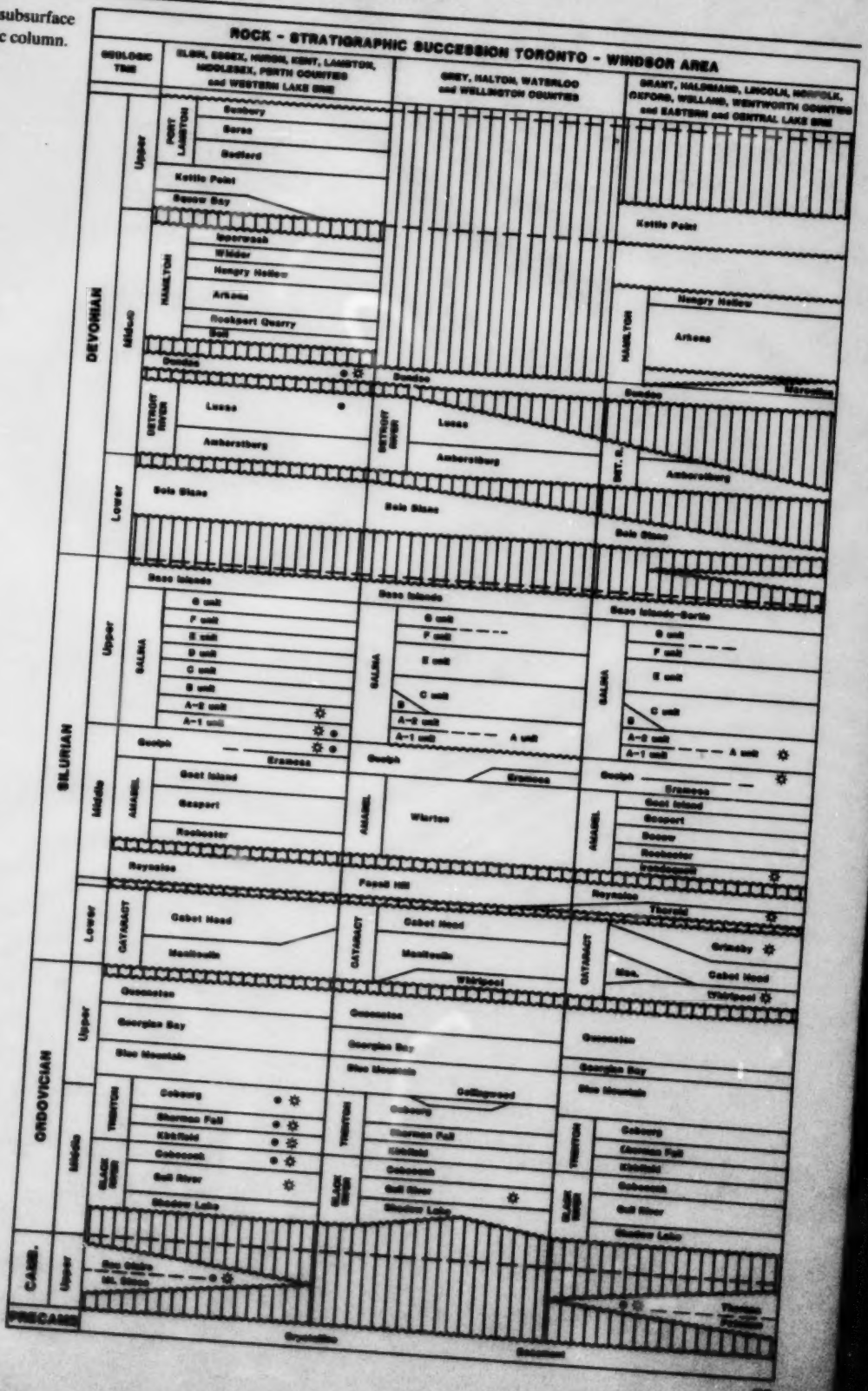

Figure 17. Composite subsurface stratigraphic column.

Appendix III. List of Publications and Maps

All reports and maps listed below are available for viewing at the Petroleum Resources Laboratory, 659 Exeter Road, London, Ontario. Publications may be purchased at the indicated locations. Provincial sales tax (8%) applies to map and microfiche orders only from Ontario residents. The federal Goods and Services Tax (GST) (7%) applies to all orders from Canadian residents. Orders should be accompanied by cheque or money order, payable to the Treasurer of Ontario. Cheques and money orders for Open File Reports should be made payable to Astley-Gilbert Reproductions Limited.

Reports and Maps (personal shopping, mail or telephone)

The Public Information Centre, Ministry of Natural Resources, Room 1640, Whitney Block, Queens Park, Toronto, Ontario, M7A 1W3. Telephone (416) 965-1348.

Open File Reports

Astley-Gilbert Reproductions Limited, 42 Carnforth Road, Toronto, Ontario M4A 2K7

Attention: Wayne Wilbur tel. 416-288-8666

ANNUAL REPORTS

Annual Report, 1954, Ontario Fuel Board $1.00

Annual Reports, 1960, 1966, 1967, 1969, 1970 $1.00

Annual Reports, 1971, 1972, 1973, 1974 $5.00

Oil and Gas Paper 1, 1978 $10.00

Oil and Gas Papers 2-11, 1979-88 $20.00

ONTARIO GEOLOGICAL SURVEY

Open File Reports

OFR 5498 Evaluation of the Conventional and Potential Oil and Gas Reserves of the Ordovician of Ontario; by Bailey Geological Services Ltd. and Robert O. Cochrane, 1984, 77p., 8 appendices, 35 figures.

OFR 5499 Evaluation of the Conventional and Potential Oil and Gas Reserves of the Cambrian of Ontario; by Bailey Geological Services Ltd. and Robert O. Cochrane, 1984, 72p., 8 appendices, 29 figures.

OFR 5555 Evaluation of the Conventional and Potential Oil and Gas Reserves of the Devonian of Ontario, by Bailey Geological Services Ltd. and Robert O. Cochrane, 1985, 178p., 9 appendices, and 46 figures.

OFR 5578 Evaluation of Conventional and Potential Oil and Gas Reserves of the Silurian Sandstone Reservoirs of Ontario; by Bailey Geological Services Ltd. and Robert O. Cochrane, 1985, 275p., 12 appendices, and 39 figures.

OFR 5722 Geology of selected oil and gas pools in the Silurian carbonates of southern Ontario; by Bailey Geological Services Ltd. and Robert O. Cochrane, 1990, 50 p., 35 maps

Petroleum Resources

P. Number Maps Available at a Scale of 1:250,000

All P. Number Maps are 50 cents each unless otherwise specified.

P.2625 Structure Top Trenton Group, North West Area, Southern Ontario

P.2626 Structure Top Trenton Group, South West Area, Southern Ontario

P.2627 Structure Top Trenton Group, South Central Area, Southern Ontario

P.2628 Structure Top Trenton Group, North Central Area, Southern Ontario

P.2629 Structure Top Trenton Group, Eastern Area, Southern Ontario

P.2630 Structure Top Ordovicfian Carbonate, Ottawa Lowlands Area, Southern Ontario

P.2631 Structure Top Black River Group, North West Area, Southern Ontario

P.2632 Structure Top Black River Group, South West Area, Southern ntario

P.2633 Structure Top Black River Group, South Central Area, Southern Ontario

P.2634 Structure Top Black River Group, North Central Area, Southern Ontario

P.2635 Structure Top Black River Group, Eastern Area, Southern Ontario

P.2637 Isopach Trenton Group, North West Area, Southern Ontario

P.2638 Isopach Trenton Group, South West Area, Southern Ontario

P.2639 Isopach Trenton Group, South West Area, Southern Ontario

P.2640 Isopach Trenton Group, North Central Area, Southern Ontario

P.2641 Isopach Trenton Group, Eastern Area, Southern Ontario

P.2642 Isopach Total Ordovician Carbonate, Ottawa Lowlands Area, Southern Ontario

P.2643 Isopach Black River Group, North West Area, Southern Ontario

P.2644 Isopach Black River Group, South West Area, Southern Ontario

P.2645 Isopach Black River Group, South Central Area, Southern Ontario

P.2646 Isopach Black River Group, North Central Area, Southern Ontario

P.2647 Isopach Black River Group, Eastern Area, Southern Ontario

P.2649 Structure Top Shadow Lake Formation, North West Area, Southern Ontario

P.2650 Structure Top Shadow Lake Formation, South West Area, Southern Ontario

P.2651 Structure Top Shadfow Lake Formation, South Central Area, Southern Ontario

P.2652 Structure Top Shadow Lake Formation, North Central Area, Southern Ontario

P.2653 Structure Top Shadow Lake Formation, Eastern Area, Southern Ontario

P.2654 Structure Base Ordovician Carbonate, Ottawa Lowlands Area

P.2655 Structure Top Precambrian, North West Area, Southern Ontario

P.2656 Structure Top Prevambrian, South West Area, Southern Ontario

P.2657 Structure Top Precambrian, South Central Area, Southern Ontario

P.2658 Structure Top Precambrian, South Central Area, Southern Ontario

P.2659 Structure Top Precambrian, Eastern Area, Southern Ontario

P.2660 Structure Top Precamb rian, Ottawa Lowlands Area, Southern Ontario

P.2661 Isopach Shadow Lake Formation to Precambrian, North West Area, Southern Ontario

P.2662 Isopach Shadow Lake Formation to Precambrian, South West Area, Southern Ontario

P.2663 Isopach Shadow Lake Formation to Precambrian, South Central Area, Southern Ontario

P.2664 Isopach Shadow Lake Formation to Precambrian, North Central Area, Southern Ontario

P.2665 Isopach Shadow Lake Formation to Precambrian, Eastern Area, Southern Ontario

P.2666 Isopach Base Ordovician Carbonate to Precambrian, Ottawa Lowlands Area, Southern Ontario

Petroleum Resources

P. Number Maps Available at a Scale of 1:100,000

P.2740 Structure, Top Pre-Hamilton, Devonian Carbonates, Lake Erie Map A

P.2741 Structure, Top Pre-Hamilton, Devonian Carbonates, Lake Erie Map B

P.2742 Structure, Top Pre-Hamilton, Devonian Carbonates, Lake Erie Map C

P.2743 Structure, Top Pre-Hamilton, Devonian Carbonates, Lake Erie Map D

P.2744 Structure, Top Pre-Hamilton, Devonian Carbonates, Lake Erie Map E

P.2745 Structure, Top Pre-Hamilton, Devonian Carbonates, Lake Erie Map F

P.2746 Structure, Top Pre-Hamilton, Devonian Carbonates, Lake Erie Map G

P.2747 Structure, Top Pre-Hamilton, Devonian Carbonates, Lake Erie Map H

P.2748 Structure, Top Pre-Hamilton, Devonian Carbonates, Essex County

P.2749 Structure, Top Pre-Hamilton, Devonian Carbonates, Kent County

P.2750 Structure, Top Pre-Hamilton, Devonian Carbonates, Lambton County

P.2751 Structure, Top Pre-Hamilton, Devonian Carbonates, Elgin County

P.2752 Structure, Top Pre-Hamilton, Devonian Carbonates, Elgin County

P.2753 Structure, Top Pre-Hamilton, Devonian Carbonates, Middlesex County

P.2754 Structure, Top Pre-Hamilton, Devonian Carbonates, Oxford County

P.2755 Structure, Top Pre-Hamilton, Devonian Carbonates, Brant County

P.2756 Structure, Top Pre-Hamilton, Devonian Carbonates, Regional Municipality of Niagara

P.2757 Structure, Top Pre-Hamilton, Devonian Carbonates, Huron County

P.2758 Structure, Top Pre-Hamilton, Devonian Carbonates, Perth County

P.2759 Structure, Top Pre-Hamilton, Devonian Carbonates, Bruce County

P.2760 Isopach Gross Columbus Sandstone Section, Lake Erie Map A

P.2761 Isopach Gross Columbus Sandstone Section, Lake Erie Map B

P.2762 Isopach Gross Columbus Sandstone Section, Lake Erie Map C

P.2763 Isopach Gross Columbus Sandstone Section, Lake Erie Map D

P.2764 Isopach Gross Columbus Sandstone Section, Lake Erie Map E

P.2765 Isopach Gross Columbus Sandstone Section, Lake Erie Map F

P.2766 Isopach Gross Columbus Sandstone Section, Lake Erie Map G

P.2767 Isopach Gross Columbus Sandstone Section, Lake Erie Map H

P.2768 Isopach Gross Columbus Sandstone Section, Essex County

P.2769 Isopach Gross Columbus Sandstone Section, Kent County

P.2770 Isopach Gross Columbus Sandstone Section, Lambton County

P.2771 Isopach Gross Columbus Sandstone Section, Elgin County

P.2772 Isopach Gross Columbus Sandstone Section, Regional Municipality of Haldimand-Norfolk

P.2773 Isopach Gross Columbus Sandstone Section, Middlesex County

P.2774 Isopach Gross Columbus Sandstone Section, Oxford County

P.2775 Structure Base Columbus Sandstone, Lake Erie Map A

P.2776 Structure Base Columbus Sandstone, Lake Erie Map B

P.2777 Structure Base Columbus Sandstone, Lake Erie Map C

P.2778 Structure Base Columbus Sandstone, Lake Erie Map D

P.2779 Structure Base Columbus Sandstone, Lake Erie Map E

P.2780 Structure Base Columbus Sandstone, Lake Erie Map F

P.2781 Structure Base Columbus Sandstone, Lake Erie Map G

P.2782 Structure Base Columbus Sandstone, Lake Erie Map H

P.2783 Structure Base Columbus Sandstone, Essex County

P.2784 Structure Base Columbus Sandstone, Kent County

P.2785 Structure Base Columbus Sandstone, Lambton County

P.2786 Structure Base Columbus Sandstone Elgin County

P.2787 Structure Base Columbus Sandstone, Middlesex County

P.2788 Structure Base Columbus Sandstone, Oxford County

P.2789 Isopach Map of the Oriskany-Springvale Sandstone, Lake Erie Map A

P.2790 Isopach Map of the Oriskany-Springvale Sandstone, Lake Erie Map B

P.2791 Isopach Map of the Oriskany-Springvale Sandstone, Lake Erie Map C

P.2792 Isopach Map of the Oriskany-Springvale Sandstone, Lake Erie Map D

P.2793 Isopach Map of the Oriskany-springvale Sandstone, Lake Erie Map E

P.2794 Isopach Map of the Oriskany-Springvale Sandstone, Lake Erie Map F

P.2795 Isopach Map of the Oriskany-Springvale Sandstone, Lake Erie Map G

P.2796 Isopach Map of the Oriskany-Springvale Sandstone, Lake Erie Map H

P.2797 Isopach Map of the Oriskany-Springvale Sandstone, Essex County

P.2798 Isopach Map of the Oriskany-Springvale Sandstone, Kent County

P.2799 Isopach Map of the Oriskany-Springvale Sandstone, Lambton County

P.2800 Isopach Map of the Oriskany-Springdvale Sandstone, Elgin County

P.2801 Isopach Map of the Oriskany-Springvale Sandstone, Regional Municipality of Haldimand-Norfolk

P.2802 Isopach Map of the Oriskany-Springvale Sandstone, Middlesex County

P.2803 Isopach Map of the Oriskany-Springvale Sandstone, Oxford County

P.2804 Isopach Sylvania Sandstone, Essex County-Lake Erie

P.2805 Structure, Top Devonian Sulphur Water-Porosity, Essex County

P.2806 Structure, Top Devonian Sulphur Water-Porosity, Lambton County

P.2807 Structure, Top Devonian Sulphur Water-Porosity, Elgin County

P.2808 Structure, Top Devonian Sulphur Water-Porosity, Elgin County

P.2809 Structure, Top Devonian Sulphur Water-Porosity, Regional Municipality of Haldimand-Norfolk

P.2810 Structure, Top Devonian Sulphur Water-

Porosity, Middlesex County

P.2811 Structure, Top Devonian Sulphur Water-Porosity, Oxford County

P.2812 Structure, Top Devonian Sulphur Water-Porosity, Huron County

P.2813 Structure, Top Devonian Sulphur Water-Porosity, Perth County

P.2814 Structure, Top Deovnian Sulphur Water-Porosity, Bruce County

P.2815 Isopach Top Devonian Carbonate to Top Sulphur Water-Porosity, Kent County

P.2816 Isopach Top Devonian Carbonate to Top Sulphur Water-Porosity, Kent County

P.2817 Isopach Top Devonian Carbonate to Top Sulphur Water-Porosity, Lambton County

P.2818 Isopach Top Devonian Carbonate to Top Sulphur Water-Porosity, Elgin County

P.2819 Isopach Top Devonian Carbonate to Top Sulphur Water-Porosity, Regional Municipality of Haldimand-Norfolk

P.2820 Isopach Top Devonian Carbonate to Top Sulphur Water-Porosity, Middlesex County

P.2821 Isopach Top Devonian Carbonate to Top Sulphur Water-Porosity, Oxfrod County

P.2822 Isopach Top Devonian Carbonate to Top Sulpnur Water-Porosity, Regional Municipality of Niagara

P.2823 Isopach Top Devonian Carbonate to Top Sulphur Water-Porosity, Huron County

P.2824 Isopach Top Devonian Carbonate to Top Sulpnur Water-Porosity, Perth County

P.2825 Isopach Top Devonian Carbonate to Top Sulpnur Water-Porosity, Bruce County

P.2862 Silurian Sandstone Oil and Gas Pools, Lake Erie Map A

P.2863 Silurian Sandstone Oil and Gas Pools, Lake Erie Map B

P.2864 Silurian Sandstone Oil and Gas Pools, Lake Erie Map C

P.2865 Silurian sandstone Oil and Gas Pools, Lake Erie Map D

P.2866 Silurian Sandstone Oil and Gas Pools, Lake Erie Map E

P.2867 Silurian Sandstone Oil and Gas Pools, Lake Erie Map F

P.2868 Silurian Sandstone Oil and Gas Pools, Elgin County

P.2869 Silurian Sandstone Oil and Gas Pools, Oxford County

P.2870 Silurian Sandstone Oil and Gas Pools, Regional Municipality of Haldimand-Norfolk

P.2871 Silurian Sandstone Oil and Gas Pools, Brant County, Water-Porosity, Bruce County

P.2872 Silurian Sandstone Oil and Gas Pools, Regional Municipality of Hamilton-Wentworth

P.2873 Silurian Sandstone Oil and Gas Pools, Regional Municipality of Niagara

P.2874 Structure Top Rochester Formation, Lake Erie Map A

P.2875 Structure Top Rochester Formation, Lake Erie Map B

P.2876 Structure Top Rochester Formation, Lake Erie Map C

P.2877 Structure Top Rochester Formation, Lake Erie Map D

P.2878 Structure Top Rochester Formation, Lake Erie Map E

P.2879 Structure top Rochester Formation, Lake Erie Map F

P.2880 Structure Top Rochester Formation, Lake Erie Map G

P.2881 Structure Top Rochester Formation, Lake Erie Map H

P.2882 Structure Top Rochester Formation, Essex County

P.2883 Structure Top Rochester Formation, Kent County

P.2884 Structure Top Rochester Formation, Lambton County

P.2885 Structure Top Rochester Formation, Elgin County

P.2886 Structure Top Rochester Formation, Elgin County

P.2887 Structure Top Rochester Formation, Regional Municipality of Haldimand-Norfolk

P.2888 Structure Top Rochester Formation, Regional Municipality of Haldimand-Norfolk

P.2889 Structure Top Rochester Formation, Brant County

P.2890 Structure Top Rochester Formation, Regional Municipality of Niagara

P.2891 Structure Top Rochester Formation, Regional Municipality of Hamilton-Wentworth

P.2892 Structure Top Rochester Formation, Regional Municipality of Halton

P.2893 Structure Top Rochester Formation, Regional Municipality of Waterloo

P.2894 Structure Top Rochester Formation, Perth County

P.2895 Structure Top Rochester Formation, Huron County

P.2896 Structure Top Rochester Formation, Wellington County

P.2897 Structure Top Rochester Formation, Regional Municipality of Peel

P.2898 Structure Top Rochester Formation, Dufferin County

P.2899 Structure Top Rochester Formation, Simcoe County

P.2900 Structure Top Rochester Formation, Bruce County

P.2901 Structure Top Rochester Formation, Grey County

P.2902 Isopach Silurian Thorold Sandstone, Lake Erie Map A

P.2903 Isopach Silurian Thorold Sandstone, Lake Erie Map B

P.2904 Isopach Silurian Thorold Sandstone, Lake Erie Map C

P.2905 Isopach Silurian Thorold Sandstone, Lake Erie Map D

P.2906 Isopach Silurian Thorold Sandstone, Lake Erie Map E

P.2907 Isopach Silurian Thorold Sandstone, Lake Erie Map F

P.2908 Isopach Silurian Thorold Sandstone, Elgin County

P.2909 Isopach Silurian Thorold Sandstone, Middlesex County

P.2910 Isopach Silurian Thorold Sandstone, Regional Municipality of Haldimand-Norfolk

P.2911 Isopach Silurian Thorold Sandstone, Oxford County

P.2912 Isopach Silurian Thorold Sandstone, Brant County

P.2913 Isopach Silurian Thorold Sandstone, Regional Municipality of Niagara

P.2914 Isopach Silurian Thorold Sandstone, Regional Municipality of Hamilton-Wentworth

P.2915 Isopach Silurian Thorold Sandstone, Wellington County

P.2916 Isopach Silurian Grimsby Sandstone, Lake Erie Map A

P.2917 Isopach Silurian Grimsby Sandstone, Lake Erie Map B

P.2918 Isopach Silurian Grimsby Sandstone, Lake Erie Map C

P.2919 Isopach Silurian Grimsby Sandstone, Lake Erie Map D

P.2920 Isopach Silurian Grimsby Sandstone, Lake Erie Map E

P.2921 Isopach Silurian Grimsby Sandstone, Lake Erie Map F

P.2922 Isopach Silurian Grimsby Sandstone, Elgin County

P.2923 Isopach Silurian Grimsby Sandstone, Middlesex County

P.2924 Isopach Silurian Grimsby Sandstone, Regional Municipality of Haldimand-Norfolk

P.2925 Isopach Silurian Grimsby Sandstone, Oxford County

P.2926 Isopach Silurian Grimsby Sandstone, Brant County

P.2927 Isopach Silurian Grimsby Sandstone, Regional Municipality of Niagara

P.2928 Isopach Silurian Grimsby Sandstone, Regional Municipality of Hamilton-Wentworth

P.2929 Isopach Silurian Whirlpool Sandstone, Lake Erie Map A

P.2930 Isopach Silurian Whirlpool Sandstone, Lake Erie Map B

P.2931 Isopach Silurian Whirlpool Sandstone, Lake Erie Map C

P.2932 Isopach Silurian Whirlpool Sandstone, Lake Erie Map D

P.2933 Isopach Silurian Whirlpool Sandstone, Lake Erie Map E

P.2934 Isopach Silurian Whirlpool Sandstone, Lake Erie Map F

P.2935 Isopach Silurian Whirlpool Sandstone, Lake Erie Map G

P.2936 Isopach Silurian Whirlpool Sandstone, Elgin County

P.2937 Isopach Silurian Whirlpool Sandstone, Middlesex County

P.2938 Isopach Silurian Whirlpool Sandstone, Oxford County

P.2939 Isopach Silurian Whirlpool Sandstone, Regional Municipality of Haldimand-Norfolk

P.2940 Isopach silurian Whirlpool Sandstone, Brant County

P.2941 Isopach Silurian Whirlpool Sandstone, Regional Municipality of Niagara

P.2942 Isopach Silurian Whirlpool Sandstone, Regional Municipality of Hamilton-Wentworth

P.2943 Isopach Silurian Whirlpool Sandstone, Regional Municipality of Halton

P.2944 Isopach Silurian Whirlpool Sandstone, Wellington County

P.2945 Isopach Silurian Whirlpool Sandstone, Regional Municipality of Peel

P.2946 Isopach Silurian Whirlpool Sandstone, Dufferin County

P.2947 Isopach Silurian Whirlpool Sandstone, Grey County

P.2948 Isopach Silurian Whirlpool Sandstone, Somcoe County

P.2992 Isopach Top Guelph to Top Rochester, Lake Erie Map A

P.2993 Isopach top Guelph to Top Rochester, Lake Erie Map B

P.2994 Isopach Top Guelph to Top Rochester, Lake Erie Map C

P.2995 Isopach Top Guelph to Top Rochester, Lake Erie Map D

P.2996 Isopach Top Guelph to Top Rochester, Lake Erie Map E

P.2997 Isopach Top Guelph to Top Rochester, Lake Erie Map F

P.2998 Isopach Top Guelph to Top Rochester, Lake Erie Map G

P.2999 Isopach Top Guelph to Top Rochester, Lake Erie Map H

P.3000 Isopach Top Guelph to Top Rochester, Essex County

P.3001 Isopach Top Guelph to Top Rochester, Kent County

P.3002 Isopach Top Guelph to Top Rochester, Lambton County

P.3003 Isopach Top Guelph to Top Rochester, Middlesex County

P.3004 Isopach Top Guelph to Top Rochester, Elgin County

P.3005 Isopach Top Guelph to Top Rochester, Oxford County

P.3006 Isopach Top Guelph to Top Rochester, Regional Municipality of Haldimand-Norfolk

P.3007 Isopach Top Guelph to Top Rochester, Brant County

P.3008 Isopach Top Guelph to Top Rochester, Regional Municipality of Niagara

P.3009 Isopach Top Guelph to Top Rochester, Regional Municipality of Hamilton-Wentworth

P.3010 Isopach Top Guelph to Top Rochester, Regional Municipality of Halton

P.3011 Isopach Top Guelph to Top Rochester, Regional Municipality of Waterloo

P.3012 Isopach Top Guelph to Top Rochester, Perth County

P.3013 Isopach Top Guelph to Top Rochester, Huron County

P.3014 Isopach Top Guelph to Top Rochester, Wellingotn County

P.3015 Isopach Top Guelph to Top Rochester, Regional Municipality of Peel

P.3016 Isopach Top Guelph to Top Rochester, Dufferin County

P.3017 Isopach Top Guelph to Top Rochester, Simcoe County

P.3018 Isopach Top Guelph to Top Rochester, Bruce County

P.3019 Isopach Top Guelph to Top Rochester, Grey County

P.3020 Structure Top Salina A-2 Carbonate, Lake Erie Map A

P.3021 Structure Top Salina A-2 Carbonate, Lake Erie Map B

P.3022 Structure Top Salina A-2 Carbonate, Lake Erie Map C

P.3023 Structure Top Salina A-2 Carbonate, Lake Erie Map D

P.3024 Structure Top Salina A-2 Carbonate, Lake Erie Map E

P.3025 Structure Top Salina A-2 Carbonate, Lake Erie Map F

P.3026 Structure Top Salina A-2 Carbonate, Lake Erie Map G

P.3027 Structure Top Salina A-2 Carbonate, Lake Erie Map H

P.3028 Structure Top Salina A-2 Carbonate, Essex County

P.3029 Structure Top Salina A-2 Carbonate, Kent County

P.3030 Structure Top Salina A-2 Carbonate, Lambton County

P.3031 Structure Top Salina A-2 Carbonate, Middlesex County

P.3032 Structure Top Salina A-2 Carbonate, Elgin County

P.3033 Structure Top Salina A-2 Carbonate, Oxford County

P.3034 Structure Top Salina A-2 Carbonate, Haldimand-Norfolk

P.3035 Structure Top Salina A-2 Carbonate, Brant County

P.3036 Structure Top Salina A-2 Carbonate, Regional Municipality of Niagara

P.3037 Structure Top Salina A-2 Carbonate, Regional Municipality of Waterloo

P.3038 Structure Top Salina A-2 Carbonate, Perth County

P.3039 Structure Top Salina A-2 Carbonate, Huron County

P.3040 Structure Top Salina A-2 Carbonate, Bruce County

P.3041 Structure Top Salina A-2 Carbonate, Wellington County

P.3042 Formation Subcrop Map, Manitoulin Island

P.3054 Structure Top Salina A-2 Carbonate, Grey County

MAPS

The following maps and copies of well history cards and related technical information may be obtained by writing to: Petroleum Resources Section, Ministry of Natural Resources, P.O. Box 5463, London, Ontario N6A 4L6 (519-661-2766). Provincial sales tax (8%) applies to map and microfiche orders only from Ontario residents. The federal Goods and Services Tax (GST)(7%) applies to all orders from Canadian residents. Orders should be accompanied by cheque or money order, payable to the Treasurer of Ontario. GST Number is R124668666.

Well history cards may also be obtained at the Petroleum Resources Laboratory (519-661-2796).

Well Location and Status (Current)

NTS Series - Key Map
Scale 1:30,000 — $1.50 each

A2,3	(A3 Pelee Island)
B1 to 5	(inclusive)
C1 to 7	(inclusive)
D1 to 13	(inclusive)
E4 to 18	(inclusive)
F4 to 17	(inclusive)
G6 to 10	(inclusive)
H7 to 9	(inclusive)
I7 to 9	(inclusive)
J7 to 8	(inclusive)
K7 to 8	(inclusive)
Q5 to 6	(Manitoulin Island)

Lake Erie

Scale 1:50,000
Showing Well and Pipeline Locations

(West Longitude)	$3.00 each
Lake Erie Map A	79° 30' - 78° 55'
Lake Erie Map B	80° 00' - 79° 30'
Lake Erie Map C	80° 30' - 80° 00'
Lake Erie Map D	81° 00' - 80° 30'
Lake Erie Map E	81° 31' - 81° 00'
Lake Erie Map F	82° 00'- 81° 30'
Lake Erie Map G	82° 30'- 82° 00'
Lake Erie Map H	83° 10'- 82° 30'

Field and Pool Maps

Scale 1:20,000 — $1.00 each

Aldborough 4-20-VII	Hemlock
Arthur	Hillman
Colchester	Innerkip
Becher West	Innerkip East
Bentpath	Kimball-Colinville, Payne, Seckerton
Bickford	Ladysmith
Brigden	Malden
Clearville	Moore 2-13-VIII
Corunna	Moore 7-6-III
Corey East	Moore 3-21-XII
Courtright	Oil City
Coveny	Oil Springs
Cromar	Oil Springs East
Crowland	Osborne
Dawn 4-28-III	Otter Creek-Otter Creek East
Dawn 4-33-IX	Oxley
Dawn 5-27-III	Plympton 5-19-VI
Dawn 5-30-IV	Rodney
Dawn 7-28-V	Rosedale
Dawn 23-II	Ruscom River
Dawn 47-49	Sarnia 1-8-A

Dawn 59-85	St. Patricks
Dawn 156	Sombra
Dawn 167	Terminus-Terminus North
Dawn Sombra	Tipperary-Tipperary South
Dover	Townsend
Dover 1-11-V	Venison Creek
Dover 7-5-V E	Verscoyle West
Dungannon	Waubuno
Enniskillen 2-30-IX	Wilkesport
Enniskillen 28	Willey
Glencoe	Willey North
Gobles	Wilsonville
Gosfield South	Wilsonvbille South
Grand Bend	Zone

Oil And Gas Pool & Pipeline Map Of Southwestern Ontario, P.2499

Scale 1:250,000 $1.50 each

Location Of Seismic Lines, Southwestern Ontario

Scale 1:100,000 $.50 each

1979 7 Maps P.2573 to P.2579 (inclusive)
1980 8 Maps P.2707 to P.2714 (inclusive)

DIGITAL MAPS AND REPORTS

Lake Erie Land Disposition Map

Color plot $50.00

Autocad .DWG file on 5¼" or 3½" diskette $100.00

Sombra Township Subsurface Geology

Consistent set of formation top picks for selected Devonian and Silurian formations for all wells drilled in Sombra Township to the end of 1986.

Ascii and dBase IV .dbf file
on 3½" high-density diskette $50.00

MICROFICHE

Hudson Bay - James Bay Microfiche Index Assessment Reports. These reports are out-of-print. A set of reports is on file at the Petroleum Resources Laboratory.

INDEX NUMBER	CONTENTS
A	Field report general geological reconnaisance of Hudson Bay - summer 1908
B	Detailed geomorphic evaluation of James Bay
C	Detailed geomorphic evaluation James Bay Low lands Aquintaine (compiled by geophoto
D	Studies of samples collected around the Hudson Bay Lowlands & Northern Islands - Canada summer 1968. Comparisons with Kaskattama No. 1 well - 1969.
E	Aeromagnetic interpretation for part of Moosonee River Basin, District of Cochrane, Aquintaine 1969
F	Aerial magnetic interpretation Moose River area, Mid-eastern Oil and Gas Ltd., Anthony Oil and Gas Explorations Ltd., Dolphin Explorations Ltd.
G	Gravity survey, Moose River area, Mid-eastern Oil & Gas Ltd., Anthony Oil & Gas Ltd., Dolphin Explorations Ltd.
H	Gravity survey, Fort Severn Area, Mid-eastern Oil & Gas Ltd., Anthony Oil & Gas Explorations Ltd., Dolphin Explorations Ltd.
I	Aerial magnetic interpretation, Fort Severn area, Mid-eastern Oil & Gas Ltd., Anthony Gas & Oil Explorations Ltd., Dolphin Explorations Ltd.
J	Aerial magnetic interpretation, Moose River area, Transalta Oil & Gas Ltd.
K	Gravity Survey, Moose River area, Tansalta Oil & Gas Ltd.
L	Transalta - Geological Report, Licence No. 14502 and 14503 - James Bay
M	Aquintaine - Laboratory Report Pen. No. 1 well
N	Bluewater - geomorphic evaluation, Moose River Basin
O	Bluewater - Geology, James Bay
P	Bluewater - Geology, James Bay
Q	Mariner - geology and petroleum possibilities, Moose River Basin
R	Quintaine - Palynoplanklogical study, Sandbank Lake No. 1 Well
S	Consumers' - Aeromagnetic interpretation, James Bay
T	Consumers' - Interpretation of G.S.C. Aeromagnetic Survey Soweska River, James Bay
U	Aquitaine - 1. High Sensitivity Aeromagnetic Survey, James Bay. 2. Refraction and gravity, James Bay
V	Aquitaine - Refraction and gravity survey, Hambly Lake Well No. 1
W	Consumers' - Aeromagnetic Survey, Martinson Lake Report on Airborne Magnetometer surveys for Aquitaine - James Bay Lowlands (not microfilmed)

OUT OF PRINT

Out of print originals are on file with the Mines Library, Ministry of Northern Development and Mines, 77 Grenville St., Room 812, Toronto, Ontario, N5S 1B3 (416-965-1352)

Annual Reports for 1920-1953, 1955-1959, 1961-1965, 1967, 1968.

Paper 67-2. A Guide to the Subsurface Paleozoic Stratigraphy of Southern Ontario, By R.J. Beards.

Paper 68-2. Subsurface Disposal of Liquid Wastes in Ontario, by D.D. McLean.

Paper 71-2. Structural Geology of Southwestern Ontario and Southeastern Michigan, by Robert J. Brigham.

Paper 73-2. The Oil and Gas Potential of the "Clinton-Cataract" Reservoirs of Norfolk County, by T.A. MacDougall.

Report of the Committee on Oil and Gas Resources Part 1 (Offshore Activity - 1961) Part 2 (Underground Storage of Natural Gas - 1962).

Index of Ordovician and Cambrian Wells Drilled in Southwestern Ontario Prior to 1963, by D.A. Sharp

Paper 11-1a. Background paper on Ontario Petroleum Resources.

Offshore Exploration in Great Lakes Region, by Bryson C. Donnan, 1961.

Geological Circular 7. Offshore exploration for Gas Under the Canadian Waters of the Great Lakes, by A.C. Newton and W.E. Koepke, 1964.

1990 AAPG EASTERN SECTION MEETING PUBLICATIONS

The following publications may be ordered from: Ontario Petroleum Institute, 555 Southdale Road East, London, Ontario N6E 1A2. Telephone 519-680-1620.

GST # R104001458

Payment in Canadian funds must accompany order. Please add 7% GST, and shipping and handling charges to all orders. Shipping and handling charges are as follows:

$3.00 for orders $30.00 or less, $4.00 for orders $30.01 to $50.00, and $5.00 for orders valued at more than $50.00.

Subsurface geology of southwestern Ontario: a core workshop
146 p., 50 figures, 22 plates $30.00

Field trip 1 - Bedrock geology and the Precambrian-Paleozoic unconformity in southeastern Ontario $8.00

Field trip 2 - Stratigraphy and depositional environments of Niagaran carbonates, Bruce peninsula, Ontario $8.00

Field trip 3 - Stratigraphy, sedimentology, and biostratigraphy of the Peterborough-Lake Simcoe area of southern Ontario $10.00

Field trip 4 - Gypsum deposits and stratigraphy of the Salina A and B units, Algonquin Arch-Niagara Peninsula, southwestern Ontario $8.00

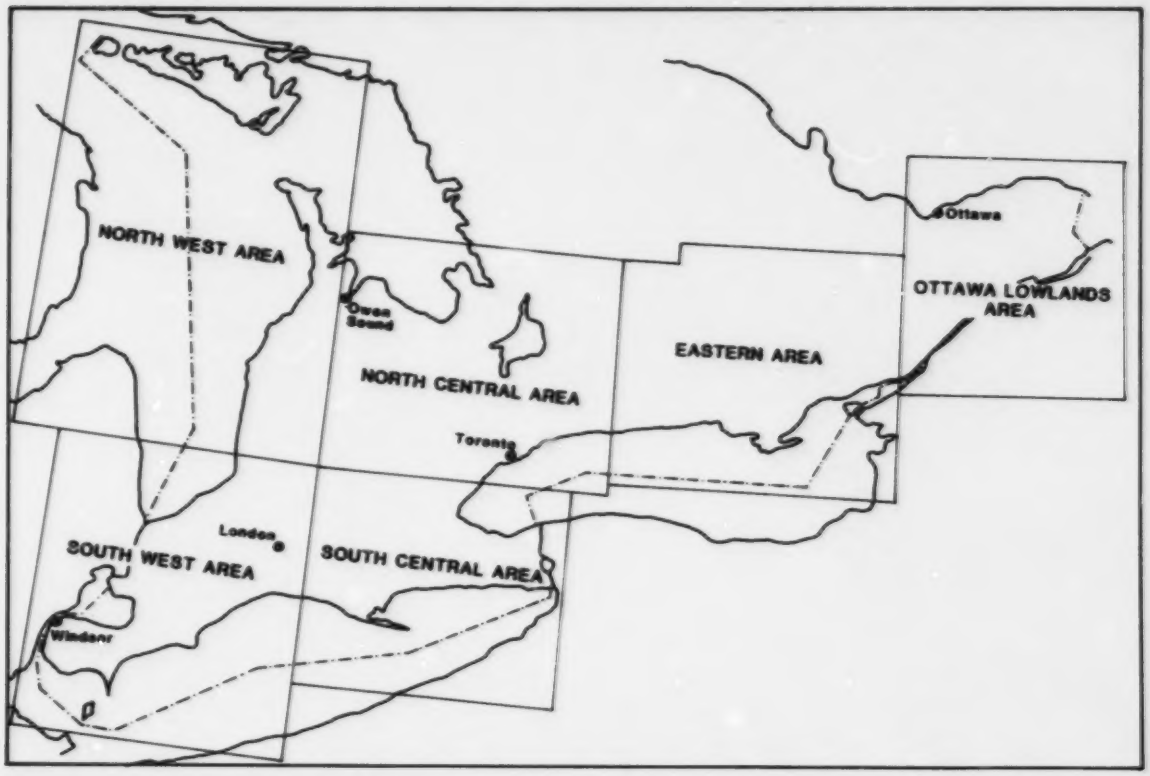

Figure 18. Key map for O.G.S. Petroleum Resources P. Number maps (1:250,000).

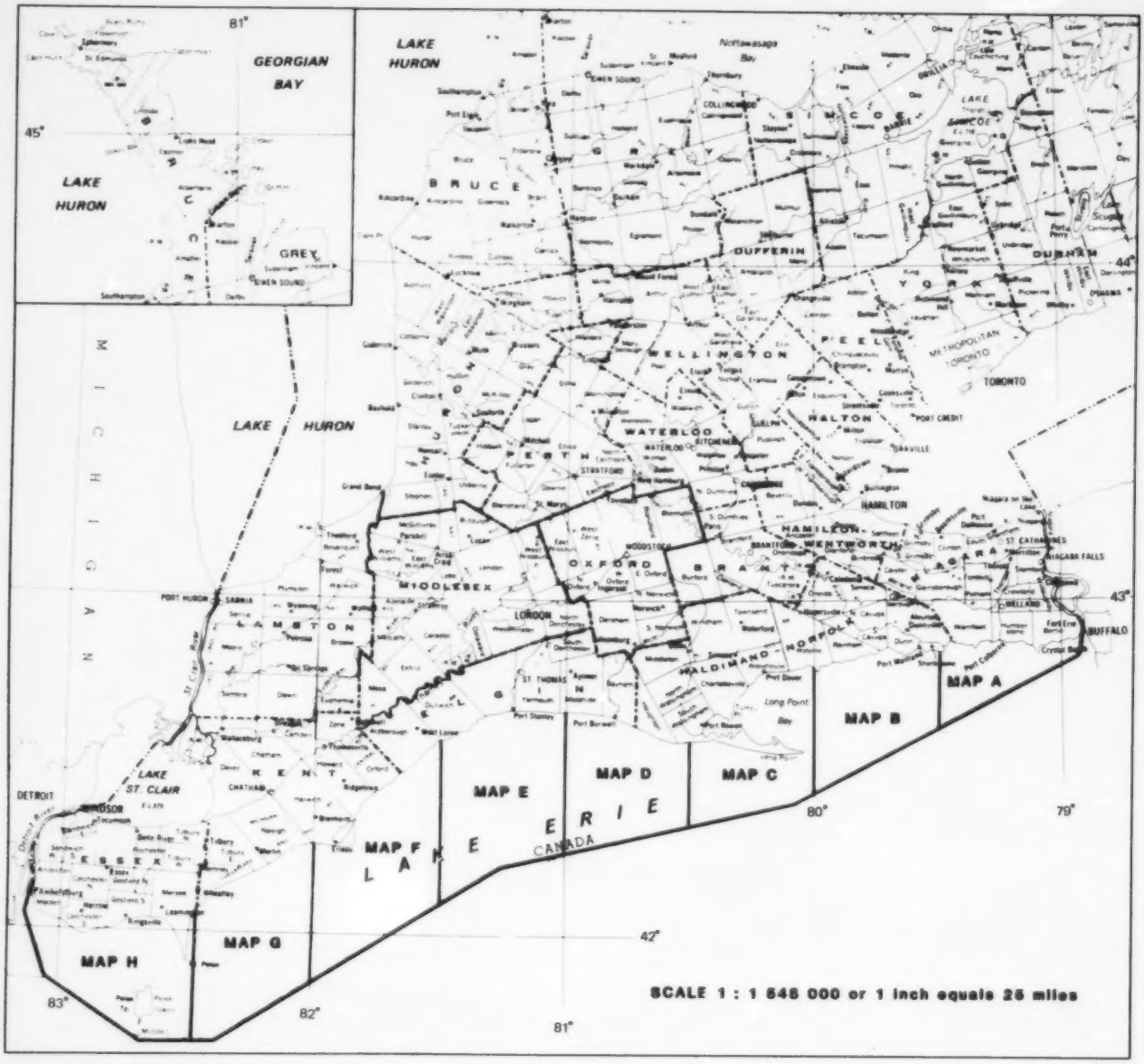

Figure 19. Key map for O.G.S. Petroleum Resources P. Number maps (1:100,000).

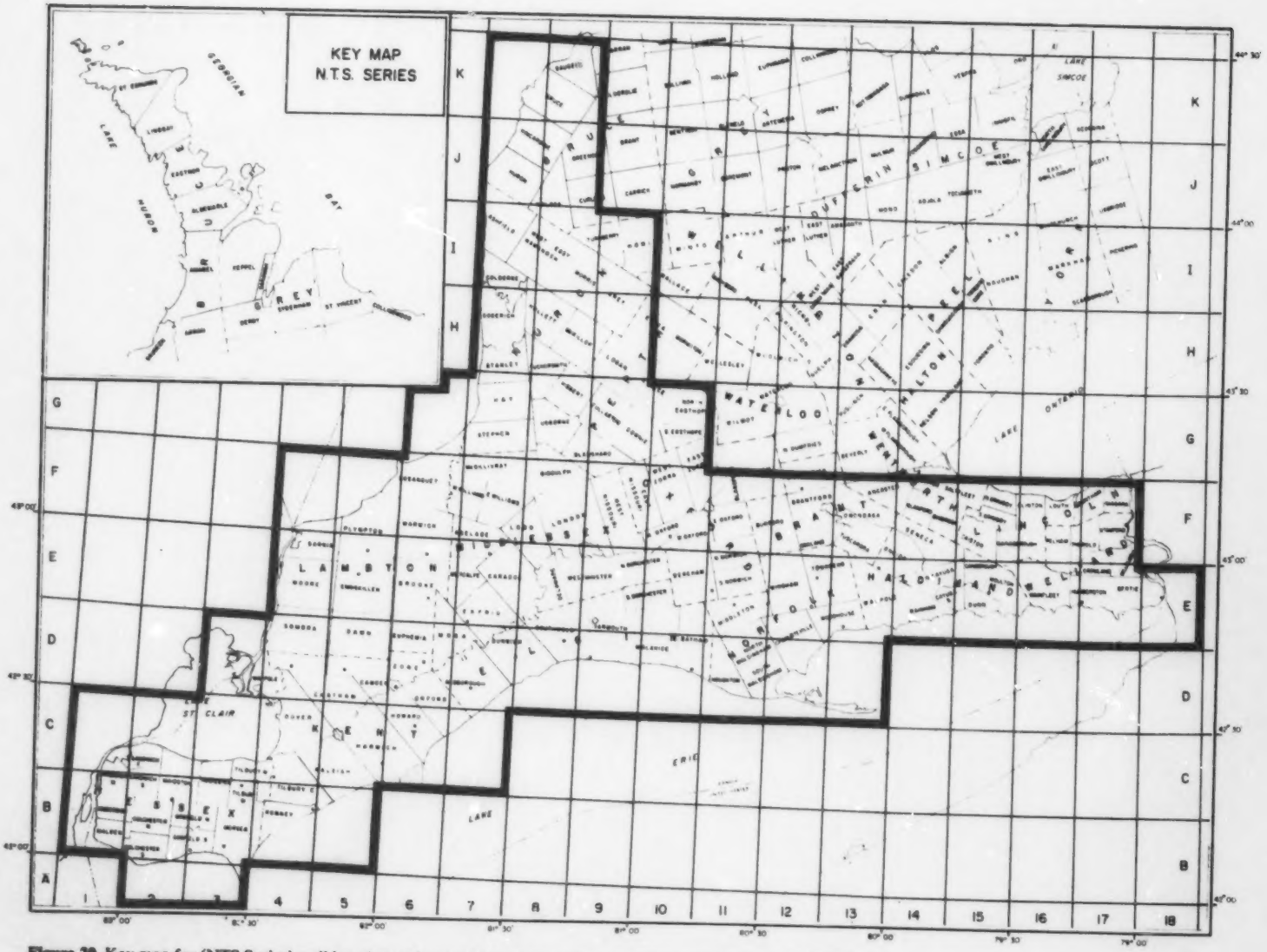

Figure 20. Key map for (NTS Series) well location and status base maps, onshore - southwestern Ontario (1:30,000).

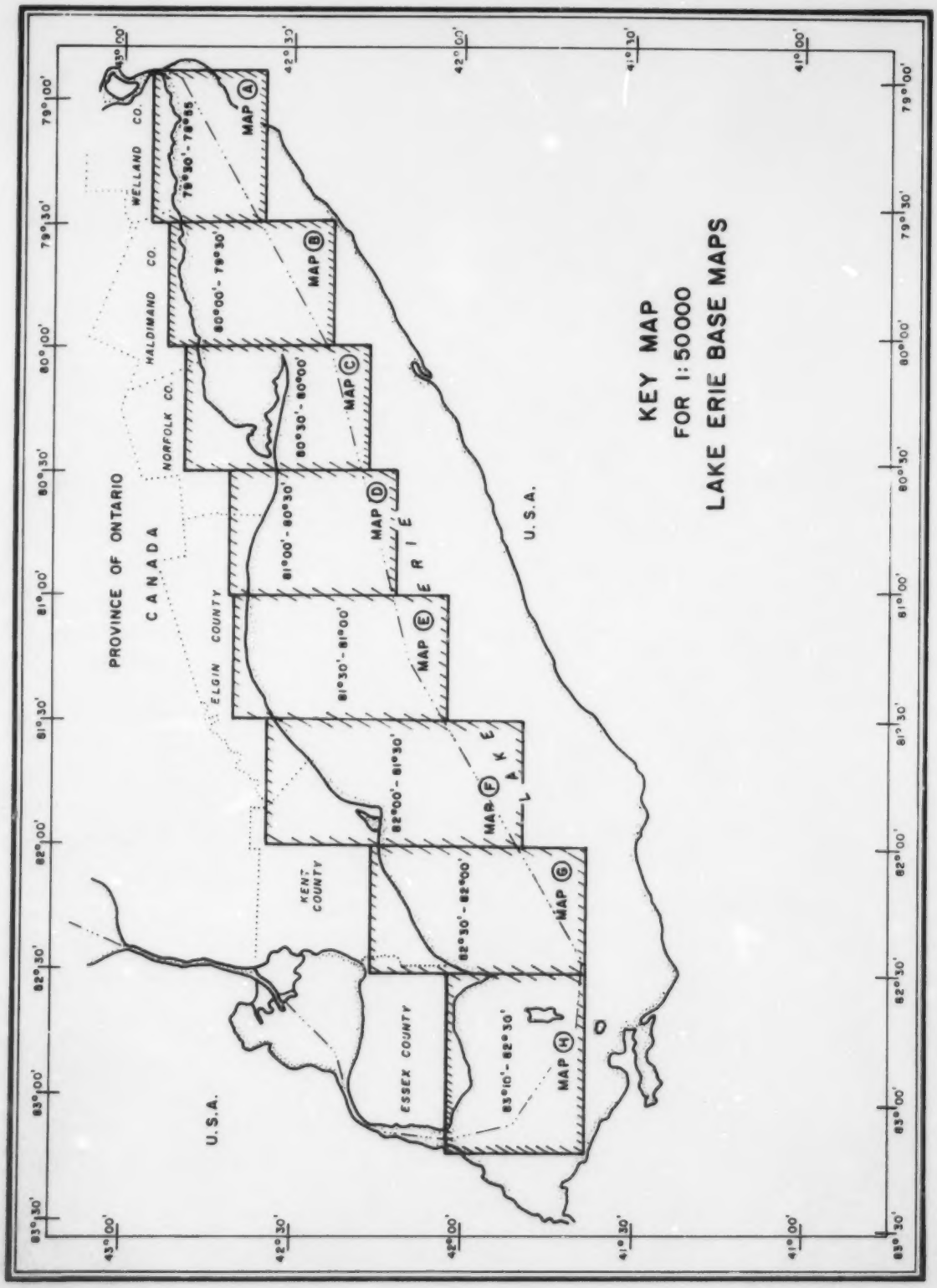

Figure 21. Key map for Lake Erie well location and status base maps (1:50,000).

Appendix IV.
Explanation of Data Items and Abbreviations

WELL NAME: The official name of the well as issued on the Permit to Bore, Drill, or Deepen a Well (Form 106). Deviated wells can be identified by the term "Deviated 1, 2 etc included in the well name.

PERMIT NO.: This number is assigned to the well location upon approval of the Application for a Permit to Bore, Drill, or Deepen a Well. Where the original location is abandoned as a result of drilling or completion difficulties, and the rig is moved or skidded to a new location within the same drilling tract, the original Permit No. using the alphabetical suffix "A" will apply to the second well. Deviated wells involving re-entry of an existing well require new permits.

CLASSIFICATION: Each well is classified at the time the Application for a Permit to Bore, Drill, or deepen a Well is approved.

Classification Codes

NPW New Pool Wildcat
DPT Deeper Pool Test
SPT Shallower Pool Test
DEV Development
BD Brine Disposal
BW Natural Brine Production
INJ Injection
LPG Liquid Petroleum Gas Storage
NGS Natural Gas Storage
OBS Observation
SM Solution Mining
STR Stratigraphic Test

TARGET: Chronostratigraphic system or lithostratigraphic group which include the rock unit which is the primary target of the well being drilled.

Seven primary targets are recognized in Ontario.

DEV Devonian

SIL Silurian - unsubdivided

SAL Silurian - targets within the Salina Group and Guelph Formation in particular, and the Rochester to Bass Islands Formations inclusive.

CLI Silurian - targets within the Clinton and Cataract (or Medina) Groups (Whirlpool to Irondequoit Formations inclusive).

ORD Ordovician

CAM Cambrian

PRE Precambrian (usually stratigraphic tests).

CURRENT STATUS: Status of the well following drilling and completion (if attempted).

Current Status Codes

GP Gas Producer
GP-SUS Gas Producer-Suspended
GP-ABD Gas Producer-Abandoned
GS Gas Show
GS-SUS Gas Show-Suspended
GS-ABD Gas Show Abandoned
OP Oil Producer
OP-SUS Oil Producer-Suspended
OP-ABD Oil Producer-Abandoned
OS Oil Show
OS-SUS Oil Show-Suspended
OS-ABD Oil Show-Abandoned
BD Brine Disposal
BD-SUS Brine Disposal-Suspended
BD-ABD Brine Disposal-Abandoned
BP Brine Producer
BP-SUS Brine Producer-Suspended
BP-Abd Brine Producer-Abandoned
DH Dry Hole
DH-SUS Dry Hole-Suspended
DH-ABD Dry Hole-Abandoned
INJ Injection
INJ-SUS Injection-Suspended
INJ-ABD Injection-Abandoned
LOST-SUS Lost-Suspended
LOST-ABD Lost-Abandoned
LPG Liquid Petroleum Storage
LPG-SUS Liquid Petroleum Storage-Suspended
LPG-ABD Liquid Petroleum Storage-Abandoned
NGS Natural Gas Storage
NGS-SUS Natural Gas Storage-Suspended
NGS-ABD Natural Gas Storage-Abandoned
OBS Observation
OBS-SUS Observation-Suspended
OBS-ABD Observation-Abandoned
SOURCE Water Source Well
SOURCE-SUS Water Source Well-Suspended
SOURCE-ABD Water Source Well-Abandoned
STR-SUS Stratigraphic Test-Suspended
STR-ABD Stratigraphic Test-Abandoned

RESULTS: Results of the drilling operation. The results are usually but not necessarily the same as the well status following completion. For example, a reentry of an existing oil producer for a deeper pool test may be unsuccessful in discovering a new accumulation of hydrocarbons at the target horizon. Consequently the results of the drilling operation would be DH, but the status would be OP if the well is recompleted at the original producing interval.

GEOGRAPHIC DESCRIPTION: Wells are listed alphabetically by County, Township, Block, Tract, Lot and Concession.

Abbreviations for concessions

ENR East of North Road
NER North Egremont Road
NLR North Lake Road
NTR North Talbot Road
RR River Range
SER South of Egremont Road
SMR South of Malden Road
STR South Talbot Road

CO-ORDINATES: Surveyed co-ordinates for all land wells are given in metres from lot lines, unless otherwise stated. Surveyed co-ordinates for lake wells are recorded by latitude and longitude, in degrees, minutes, and seconds. Latitude and longitude values for all land wells have also been determined and appear in this report.

KB ELEVATION: Ground elevation in metres above sea level plus number of metres to rig floor or kelly bushing.

RIG TYPES: Abbreviation for rig types are as follows:

CAB Cable Tool Rig
ROT Rotary Rig
UNK Unkown

SAMPLES: Drill cuttings samples are retained for all wells and are available for examination at:

Petroleum Resources Laboratory
Ontario Ministry of Natural Resosurces
659 Exeter Road
London, Ontario, Canada
N6E 1L3

CORES: The intervals cored are given and unless otherwise stated, the cores are stored at the Petroleum Resources Laboratory.

Core Type Codes

CC1 2.5 cm Wedge
CC2 Conventional (greater than 5 cm)
CCF Full Width Slab
CCO Core Chips Only
RSO Representative Sections Only
SC2 Slimhole (Less than 5 cm)
SCS Slimhole Slabbed

TREATMENT: If a well has been stimulated to increase production, a treatment code is included to indicate the type of stimulation program.

Treatment Type Codes

ACID Acidized
CONF Fracture-conventional
OYNM Explosives-dynamite
FOAM Fracture-foam
LARF Fracture-large volume
NTGY Explosives-nitroglycerine
SHOT Explosives-shot

LOGGING RECORD: The type of logs taken at the well and the logging company are recorded.

Log Type Codes

ACSL Acoustic
CALP Caliper
CBLK Cyberlook
CBND Cement Bond
CBVD Cement Bond Variable Density
CCL Cosing Collar Locator
CDM Continuous Dipmeter
CFLO Continuous Flowmeter
CIS Customer Instrument Services
CLDL Chloride Detection
CMPL Completion
CNFD Compensated Neutron-Formation Density
CNL Compensated Neutron
COAL Coal
COL Carbon/Oxygen
CONL Contact
CORI Coriband
DENL Density
DIFS Dual Induction Spherically Focussed Laterlog
DIL Dual Induction Laterolog
DILS Dual Induction/Sonic
DIPM Dipmeter
DIRS Directional Survey
DLL Dual Laterolog
DLLM Dual Laterolog Micro SFL
EAS Epilog Analysis System
ELPR Electromagnetic Propagation
ES Electric Survey
FDC Formation Density Compensated

FFLO Full Bore Flowmeter
FIT Fomation Internal Tester
FMS Formation Microscanner
FOCL Focus
FRID Fracture Identification
FRXL Forxo
GGDE Gamma-Gamma Density
GRAD Gradiometer
GRDL Guard
GRFD Gamma Ray-Formation Density
GRL Gamma Ray
GRNL Gamma Ray-Neutron
GRSL Gamma Ray-Sonic
GSAR Geothermal Saraband
HCDS Hydrocarbon or Gas
HEL Hostile Environment
HRT High Resolution Thermometer
IES Induction Electric Survey
ISF Induction Spherically Focussed
ISFM ISF Microspherically Focussed
ISOL Isotron
LASL Laser
LATL Dual Laterolog
LDT Lithodensity
LSL Limestone
LSS Long-spaced Sonic
MAGL Nuclear Magnetism
MEL Micro-electrical Log
MICL Microlog
MLAT Microlaterolog
MICS Microsurvey
MINF Minifocus
MINL Minilog
MLAL Forxo
MLAT Microlaterolog
MPL Mechanical Properties
MSFL Micro-Spherically Focussed Laterolog
MSGM Microseismogram
NEUT Neutron
NFLO Nuclear Flowlog
NGRS Natural Gamma Ray Spectroscopy
PCT Production Combination Tool
PDK Pulsed Decay Neutron
PEF Photoelectric Effect
PHOT Photon
PIP Precision Identified Perforations
PML Production Management
PRMS Permeability Spinner
PRXL Proximity
PWAS Prolog Wellsite Analysis System
PXML Proximity Microlog
RFT Repeat Formation Tester
RTRS Radioactive Tracer Survey
SARA Saraband
SCAT Scattered Gamma
SNP Sidewall Neutron Porosity
SONA Borehole Audio Tracer Survey
SONL Sonic
SONR Sonar
SP Self Potential
SRPG Surface Recorded Pressure Guage
SRSL Seismic Reference
SUL Sulfur
SYRG Synergetic Log System
TDL Temperature Differ
TDST Through Drillstem Logging
TDT Thermal Neutron Decay Time
TEL Thermal Evaluation
TMPL Temperature
TTC Through Tubing Caliper
ULSE Ultra Long Spaced Electrical
VDL Variable Density
VELS Velocity Survey
VERL Vertilog
WLS Water Location Survey
WST Well Seismic Tool
XPTL Experimental

CASING AND TUBING RECORD: Abbreviations for how the casing and tubing are set in the well.

ANC Anchor Packer
BAR Barefoot
BHP Bottom Hole Packer
CEM Cemented
COL Collar
HAN Hanging
HWP Hook Wall Packer
PAC Packer
PC Packer and Cement
SHO Casing Shoe

WATER RECORD: Abbreviations for type of water encountered while drilling a well.

BRA Brackish
BLK Black
FRE Fresh
SAL Salt
SUL Sulfur
MIN Mineral

GEOLOGY: The geological formation picks are supplied by OMNR geologists. Unpublished operator formation picks are available on Drilling and Completion Records submitted by the operators to the Ministry.

The nomenclature used in this report is based on published descriptions of the various geological units.

Appendix V.
Summary of Wells Drilled in 1988

TABLE V-1: SUMMARY OF WELLS DRILLED IN 1988

Well Name	Permit Number	TD Date	Target	Total Depth Metres	Class	Results	Producing Formation	Metres Drilled	Sample Tray No.
ELGIN COUNTY									
Lakewood IV 4-36 Aldborough 1-7-5-IV	7356	30-Jul-88	DEV	115.2	DEV	OP	Lucas	115.2	7872
Lakewood IV 1-17 Aldborough 1-8-5-IV	7353	21-Jul-88	DEV	121.9	DEV	OP	Dundee, Columbus	121.9	6664
Lakewood IV 5-37 Aldborough 3-4-5-V	7375	16-Aug-88	DEV	121.0	DEV	OP	Lucas	121.0	7865
Lakewood IV 6-20 Aldborough 2-5-5-V	7376	17-Aug-88	DEV	121.9	DEV	OP	Lucas	121.9	6689
Lakewood IV 6-19 Aldborough 3-5-5-V	7337	20-Jul-88	DEV	121.6	DEV	OP	Lucas	121.6	7870
Lakewood IV 5-34 Aldborough 2-5-5-V	7335	03-Aug-88	DEV	122.7	DEV	OP	Lucas	122.7	7865
Lakewood IV 5-31 Aldborough 2-4-5-V	7332	09-Aug-88	DEV	118.3	DEV	OP	Lucas	118.3	6664
Lakewood IV 5-32 Aldborough 2-4-5-V	7333	05-Aug-88	DEV	120.0	DEV	OP	Columbus	120.0	6664
Lakewood IV 5-33 Aldborough 4-3-5-V	7334	11-Jul-88	DEV	118.4	DEV	OP	Lucas	118.4	7870
Lakewood IV 5-35 Aldborough 4-6-5-V	7336	22-Aug-88	DEV	120.5	DEV	OP	Dundee, Lucas	120.5	7870
Lakewood IV 2-14 Aldborough 1-6-6-IV	7355	24-Jul-88	DEV	134.5	DEV	OP	Dundee	134.5	7870
Lakewood IV 2-15 Aldborough 2-7-6-IV	7354	27-Jul-88	DEV	113.8	DEV	OP	Lucas	113.8	7865
Lakewood IV 2-16 Aldborough 4-6-6-IV	7374	19-Aug-88	DEV	132.4	DEV	OP	Lucas	132.4	7878
Lakewood IV 7-23 Aldborough 1-6-6-V	7339	12-Aug-88	DEV	127.5	DEV	OP	Lucas	127.5	6664
Lakewood IV 7-22 Aldborough 1-6-6-V	7338	10-Aug-88	DEV	126.6	DEV	OP	Lucas	126.6	6664
Chatham Eagle 2 Aldborough 3-8-16-XII	7211	22-Jan-88	DEV	107.0	DEV	OS-ABD		0.0	
Chatham Eagle 3 Aldborough 4-8-16-XII	7218	09-Sep-88	DEV	94.2	DEV	OSGS-ABD		94.2	7941
Chatham Eagle 1 Aldborough 3-5-16-XII	7213	24-Jan-88	DEV	176.8	BD	BD-ABD		0.0	
Chatham Eagle 5 Aldborough 2-7-17-XII	7219	29-Sep-88	DEV	130.5	DEV	OSGS-ABD		130.5	6822
Chatham Eagle 10 Aldborough 4-7-17-XII	7406	11-Oct-88	DEV	111.0	DEV	DH-ABD		111.0	7871
Chatham Eagle 4 Aldborough 3-7-17-XII	7212	19-Jan-88	DEV	146.9	DEV	OS-ABD		50.9	112
Chatham Eagle 11 Aldborough 3-5-17-XII	7411	18-Nov-88	DEV	146.6	DEV	OS-ABD		3.6	
Judo Dunwich 8-22-BF-A	7246	28-Apr-88	CAM	1084.0	NPW	OPGS	Cambrian	1084.0	9232-33
North Hawk Southwold 8-27-STRNB	7323	13-Oct-88	CAM	1083.6	NPW	GS-ABD	Cambrian	1083.6	9260-61
ESSEX COUNTY									
Brine Well F-2 Anderdon 34-I	7255	15-Oct-88	SAL	372.5	SM	SM		372.5	9366
Consumers' 34310 Colchester North 8-1-XIII	7385	05-Sep-88	ORD	1065.6	NPW	OS-ABD		1065.6	9258-59
G.E.L. 17 Colchester South 10-81-I	7112	11-Aug-88	ORD	655.9	DEV	OPGS	Cobourg	655.9	9271
O.K. West No. 2 W. Newman No. 2 Gosfield North 5-13-IX	7370	26-Aug-88	CAM	1017.4	DPT	OPGS	Cambrian	0.0	3057
Consumers' 34311 Gosfield South 2-4-4 SEC WDFC	7361	15-Aug-88	ORD	1036.4	NPW	DH-ABD		1036.4	9272-73
Cons 34313 Gosfield South 4-9-V	7360	24-Aug-88	ORD	975.0	NPW	DH-ABD		975.0	9526-27
Consumers' 34333 Gosfield South 8-12-V	7226	08-Feb-88	ORD	1057.0	NPW	OSGS-ABD		1057.0	9262-63
Cons et al 34106 Mersea 1-15-B	7225	26-Jan-88	ORD	881.0	DEV	OPGS	Cobourg	881.0	9464-65
Ram/BP 3 Mersea 6-16-VIII	7330	12-Jul-88	ORD	966.5	DEV	OPGS	Cobourg, Verulam	966.5	9511-12
Ram/BP 2 Mersea 8-16-VIII	7231	24-Feb-88	ORD	1077.0	NPW	OPGS	Cobourg	1077.0	9209-10
Cons et al 34152 Mersea 7-17-VIII	7409	19-Oct-88	ORD	915.0	DEV	OP	Cobourg, Verulam	915.0	9541-42
Cons et al 34151 Mersea 7-18-VIII	7242	05-Mar-88	ORD	1090.0	DEV	OS-SUS		1090.0	9212-13
Ram BP #9 Tilbury North 8-16-VIII	7423	03-Dec-88	SAL	535.0	NPW	GS-ABD		535.0	6730
HALDIMAND COUNTY									
Egger 1 Canborough 2-9-II	7254	14-Apr-88	CLI	174.6	DEV	GP	Grimsby,Whirlpool	174.6	8054
Pat 4 Dunn 2-5-Sheehan Tract	7392	19-Sep-88	CLI	259.1	DEV	GP	Grimsby	259.1	6829
Armstrong 1 Oneida 66-R.R.	7233	11-Apr-88	CLI	185.9	DEV	GP	Grimsby	185.9	7960
HURON COUNTY									
Ansell Lake Res et al #1 Hay 3-23-XI	7415	25-Nov-88	SAL	615.0	DEV	GP-SUS	Guelph	615.0	8716
Orford Res et al 1 Stanley 3-5-X	7307	20-Aug-88	ORD	1114.7	NPW	DH-ABD		1114.7	9517-18
Orford Res et al #2 Stanley 3-15-VII	7412	08-Nov-88	SAL	572.0	NPW	DH-ABD		572.0	6523
Pamax et al 1 Stephen 2-23-XVI	7248	23-Apr-88	SAL	576.1	NPW	GP-SUS	Guelph	576.1	9294

TABLE V-1: Continued

Well Name	Permit Number	TD Date	Target	Total Depth Metres	Class	Results	Producing Formation	Metres Drilled	Sample Tray No.
KENT COUNTY									
Cam-Dawn 1 Camden 6-9-X Gore	7331	10-Aug-88	SAL	499.0	DEV	GS-ABD	A-1 Carbonate	499.0	7962
Brett Camden 1-11-XIV Gore	7244	08-Apr-88	SAL	444.0	DEV	GP	A-1 Carbonate	444.0	5709
PPC Chatham 2-10-II	7395	24-Sep-88	ORD	1202.1	NPW	GS-ABD		1202.1	9254-55
PPC/Ram 13 Dover 3-3-IV E	7289	21-May-88	ORD	1106.0	NPW	OP	Coboconk	1106.0	9243-44
PPC/Ram 25 Dover 5-4-IV E	7387	09-Sep-88	ORD	1078.2	DEV	OP	Kirkfield, Coboconk	1078.2	9489-90
PPC 16 Dover 7-5-IV E	7220	19-Jan-88	ORD	1070.0	NPW	OPGS	Coboconk, Gull R.	1070.0	9227-28
PPC et al 15 Dover 5-5-IV E	7240	23-Feb-88	ORD	1067.0	NPW	OPGS	Coboconk, Gull R.	1067.0	9479-80
PPC 14 Dover 1-5-IV E	7210	14-Jan-88	ORD	1159.2	DEV	GP	Verulam	1159.2	9288-89
PPC/Ram Disposal 1 Dover 2-6-6-IV E	7377	29-Sep-88	DEV	190.0	BD	BD	Lucas	190.0	5289
PPC 12 Dover 6-6-IV E	7215	10-Mar-88	ORD	1081.4	NPW	OP	Coboconk	1081.4	9466
PPC/Ram 20 Dover 3-7-III E	7321	10-Jun-88	ORD	1157.0	NPW	GP	Cobourg	1157.0	9515-16
PPC 11 Dover 4-14-III E	7214	06-Feb-88	ORD	1182.2	NPW	GS-ABD		1182.2	9421-22
PPC/Ram 17 Dover 1-16-III E	7327	23-Jun-88	ORD	1184.5	NPW	DH-ABD		1184.5	9483-84
Francisco-Pinetree Dover 4-24-VII E	7224	25-May-88	ORD	1177.8	NPW	GS-ABD		1177.8	9279-80
PPC et al Northwood 2 Harwich 1-5-24-IV RTS	7396	14-Sep-88	DEV	165.7	NPW	BD-ABD		165.7	6961
Consumers' 34380 Howard 1-96-II STR BF	7273	10-May-88	SAL	382.2	BD	BD-SUS		382.2	7418
Ram BP #8 Raleigh 3-14-XIII	7413	08-Nov-88	ORD	1203.0	NPW	OSGS-ABD		1203.0	9379-80
Ram/BP 4 Raleigh 2-14-XIV	7357	04-Aug-88	ORD	1208.0	NPW	GP	Cobourg	1208.0	9373-74
Ram/BP 5 Raleigh 1-17-XIII	7369	20-Aug-88	ORD	1186.0	NPW	GPOS-SUS	Cambrian	1186.0	9508-09
Cons P.S.J. 34512 Raleigh 6-19-XI	7419	27-Nov-88	ORD	1186.0	NPW	DH-ABD		1186.0	9440-41
Cons et al 34161 Romney 1-7-II	7272	22-Jun-88	ORD	923.0	DEV	OPGS-SUS	Verulam,Kirkfield	923.0	9520-21
Farmers 1 Romney 7-9-II	7371	07-Oct-88	ORD	843.7	DEV	OPGS		843.7	9462-63
Ram et al 1 Romney 2-11-I	7222	21-Jan-88	ORD	1090.0	DEV	DH-ABD		1090.0	9216-17
Cons et al 34346 Romney 1-12-III	7322	12-Jun-88	ORD	1101.0	NPW	OPGS-SUS	Cobourg, Verulam	1101.0	9393-94
Cons et al 34350 Romney 1-13-II	7390	17-Sep-88	ORD	940.0	DEV	OPGS	Verulam	940.0	9524-25
Cons et al 34349 Romney 3-13-III	7399	08-Oct-88	ORD	938.0	DEV	OP	Cobourg, Verulam	938.0	9493-94
Consumers et al 34345 Romney 8-13-III	7274	21-May-88	ORD	938.0	DEV	OPGS-SUS	Cobourg, Verulam	938.0	9485-86
Cons et al 34347 Romney 6-13-IV	7315	30-May-88	ORD	851.0	NPW	OPGS	Cobourg, Verulam	851.0	9404-05
Cons et al 34351 Romney 8-13-IV	7410	06-Nov-88	ORD	1110.0	DEV	OPGS	Verulam	1110.0	9544-45
Cons et al 34348 Romney 5-14-II	7398	27-Sep-88	ORD	1016.0	DEV	OSGS-ABD		1016.0	9534-35
Cons et al 34344 Romney 3-14-II	7261	11-May-88	ORD	1071.0	NPW	OPGS	Verulam	1071.0	9438-39
Cons et al 34427 Romney 5-15-I	7414	19-Nov-88	ORD	1120.0	NPW	OPGS	Cobourg, Verulam	1120.0	9385-86
Cons et al 34352 Romney 2-15-III	7421	03-Dec-88	ORD	1111.0	NPW	OP	Kirkfield	1111.0	9377-78
Kodyen Disposal Zone 2-8-7-VII	7241	27-Feb-88	DEV	201.2	BD	OS-BD	Lucas	201.2	5548
LAKE ERIE									
Pembina Lake Erie 23-G-3	7344	23-Sep-88	CLI	340.0	DEV	GP	Grimsby	340.0	7721
Pembina Lake Erie 23-K-3	7342	27-Sep-88	CLI	345.0	DEV	GS-ABD		345.0	5207
Pembina Lake Erie 38-D-2	7340	24-Jul-88	CLI	377.0	NPW	GS-ABD		377.0	7891
Pembina Lake Erie 40-G-3	7275	16-May-88	CLI	370.0	DEV	GP	Grimsby	370.0	8162
Pembina Lake Erie 40-V-1	7287	06-Jun-88	CLI	398.0	DEV	GP	Grimsby,Whirlpool	398.0	6865
Pembina Lake Erie 41-I-2	7277	22-May-88	CLI	360.0	DEV	GP	Grimsby	360.0	6789
Pembina Lake Erie 41-K-1	7278	31-May-88	CLI	372.0	DEV	GS-ABD		372.0	7832
Pembina Lake Erie 41-T-1	7279	27-May-88	CLI	385.0	DEV	GP	Whirlpool	385.0	7902
Pembina Lake Erie 42-C-3	7372	11-Sep-88	CLI	361.6	DEV	GP-ABD	Whirlpool	361.6	5439
Pembina Lake Erie 42-M-2	7280	13-Jun-88	CLI	375.0	DEV	GS-ABD		375.0	6818
Pembina Lake Erie 42-W-2	7281	17-Jun-88	CLI	395.0	DEV	GP	Grimsby	395.0	6849
Pembina Lake Erie 43-U-2	7346	30-Jul-88	CLI	398.0	DEV	DH-ABD		398.0	8463
Consumers' 13915 Lake Erie 54-K	7265	13-Jun-88	CLI	467.0	NPW	GS-ABD		467.0	6724
Pembina Lake Erie 65-F-4	7362	04-Aug-88	CLI	419.2	DEV	GP	Grimsby	419.2	7792
Pembina Lake Erie 65-V-3	7348	11-Aug-88	CLI	459.0	NPW	DH-ABD		459.0	7623
Pembina Lake Erie 70-I-3	7282	22-Jun-88	CLI	444.0	DEV	GP	Grimsby	444.0	5192
Pembina Lake Erie 70-K-3	7283	28-Jun-88	CLI	466.9	DEV	GP	Whirlpool	466.9	6398

TABLE V-1: Continued

Well Name	Permit Number	TD Date	Target	Total Depth Metres	Class	Results	Producing Formation	Metres Drilled	Sample Tray No.
LAKE ERIE Continued									
Pembina Lake Erie 70-O-4	7373	04-Sep-88	CLI	457.8	DEV	GP	Grimsby	457.8	5507
Pembina Lake Erie 70-T-4	7284	05-Jul-88	CLI	475.0	DEV	GS-ABD		475.0	6812
Pembina Lake Erie 70-V-3	7285A	20-Jul-88	CLI	486.0	DEV	GS-ABD		486.0	6758
Pembina Lake Erie 70-X-4	7286	14-Jul-88	CLI	485.0	DEV	GS-ABD		485.0	7276
Pembina Lake Erie 84-B	7285	08-Jul-88	CLI	493.0	DEV	LH-ABD		493.0	8565
Pembina Lake Erie 89-B-3	7349	16-Aug-88	CLI	475.0	DEV	GS-ABD		475.0	7605
Pembina Lake Erie 89-H-2	7350	30-Aug-88	CLI	486.7	DEV	GP	Whirlpool	486.7	7885
Place Long Point 91-F-1	7302	14-Oct-88	CLI	451.7	NPW	DH-ABD		451.7	9028
Place Long Point 91-F-2	7288	03-Aug-88	CLI	419.1	NPW	GP	Grimsby	419.1	4396
Consumers' 13913 Lake Erie 93-F	7263	18-May-88	CLI	473.0	DEV	GS-ABD		473.0	6853
Consumers' 13917 Lake Erie 119-P	7267	06-Jun-88	SAL	400.0	DEV	GP-SUS	Guelph	400.0	6673
Consumers' 13918 Lake Erie 119-Y	7268	01-Jun-88	SAL	399.0	DEV	GP	A-2, A-1, Guelph	399.0	6669
Consumers' 13916 Lake Erie 124-N	7266	10-May-88	SAL	355.0	DEV	GP	Guelph	355.0	6674
Consumers' 13907 Lake Erie 124-O	7262	06-May-88	SAL	356.0	DEV	GS-ABD		356.0	7948
Consumers' 13920 Lake Erie 153-H	7270	23-May-88	CLI	568.0	DEV	DH-ABD		568.0	7995
Consumers' 13919 Lake Erie 158-I	7269	27-May-88	SAL	398.0	DEV	GP	A-2, A-1, Guelph	398.0	6787
LAMBTON COUNTY									
Penway et al Dawn 4-18-II	7239	12-Apr-88	SAL	596.0	NPW	DH-ABD		596.0	9917
Union Dawn 264 Dawn 19-I	7120	25-Feb-88	SAL	545.0	NGS	NGS	Guelph	545.0	9468
Forbes Disposal Dawn 1-26-II	7358	28-Oct-88	DEV	183.8	BD	BD	Lucas	183.8	6683
Goldpatch 2 Dawn 5-26-X	7309	01-Jun-88	SAL	610.7	NPW	DH-ABD		610.7	3339
Goldpatch 1 Dawn 4-26-XIII	7308	19-Jul-88	SAL	583.7	NPW	OS-ABD		583.7	9226
Forbes 45 Dawn 1-28-I	7221	11-Feb-88	SAL	616.0	NPW	OS-ABD		616.0	9203
Union Dawn 269 Dawn 6-30-I	7401	04-Dec-88	SAL	620.0	OBS	OBS		620.0	9503-04
Union Dawn 270 Dawn 2-32-II	7402	29-Nov-88	SAL	607.5	OBS	OBS		607.5	9499-00
Cadington Res et al 2 Dawn 6-33-VI	7306	17-Oct-88	SAL	644.2	NPW	GS-ABD		644.2	9287
Union Dawn 267 Dawn 33-XIII	7367	03-Oct-88	SAL	589.0	OBS	OBS		589.0	9506-07
Union Dawn 265 Dawn 34-XIII	7313	16-Sep-88	SAL	520.0	NGS	NGS	Guelph	520.0	9504
Union Dawn 266 Dawn 34-XIII	7314	13-Sep-88	SAL	515.0	NGS	NGS	Guelph	515.0	9431
Union Dawn 268 Dawn 34-XIII	7368	04-Nov-88	SAL	579.8	OBS	OBS		579.8	9498
Stevenson Disp. Enniskillen 3-4-10-XI	7328	27-Jul-88	DEV	208.0	BD	OSBD-ABD		208.0	7870
Stevenson Test Enniskillen 3-4-10-XII	7393	07-Sep-88	DEV	155.4	STR	STR-ABD		12.8	6688
Stevenson Disposal 2 Enniskillen 3-4-10-XII	7397	17-Sep-88	DEV	169.1	BD	OS-BD		169.1	7710
Ayrheart 1 Disp. Enniskillen 3-8-11-XII	7319	12-Aug-88	DEV	198.1	BD	OS-BD	Lucas	198.1	6675
Flusher 1 Disp Enniskillen 2-6-11-XII	7318	17-Oct-88	DEV	198.1	BD	OSGS-BD		198.1	7650
Fairbank 1 Enniskillen 1-2-17-I	7363	21-Sep-88	DEV	122.5	BD	OSGSBD-SUS	Detroit River	122.5	6670
Fairbank 3 Enniskillen 4-2-17-I	7365	15-Aug-88	DEV	186.0	BD	OS-BD	Dundee, Columbus	186.0	6742
Fairbank 2 Enniskillen 2-1-17-I	7364	09-Sep-88	DEV	121.9	BD	OSBD-SUS	Lucas	121.9	6670
Jacques #6 Enniskillen 4-5-17-X	7249	24-May-88	DEV	143.0	DEV	OP	Columbus	143.0	7935
Cadington Res et al 1 Enniskillen 2-19-XIII	7304	24-Sep-88	SAL	726.8	NPW	DH-ABD	Lucas	726.8	9412
Perma Enniskillen 2-21-II	7228	16-Mar-88	SAL	603.2	NPW	GP	A-1 Carbonate	603.2	4399
Perma Enniskillen 8-24-VI	7227	30-Mar-88	SAL	624.8	NPW	DH-ABD		624.8	9413
Union 48 Enniskillen 28-I	7250	21-Jun-88	SAL	521.0	NGS	NGS	Guelph	521.0	9497
Union 49 Enniskillen 28-I	7251	08-Jun-88	SAL	520.0	NGS	NGS	Guelph	520.0	9270
Union 50 Enniskillen 28-I	7252	06-Jun-88	SAL	521.0	NGS	NGS	Guelph	521.0	9235
Union 51 Enniskillen 28-I	7310	25-Jul-88	SAL	519.0	NGS	NGS	Guelph	519.0	9229
Union 52 Enniskillen 28-I	7311	12-Aug-88	SAL	518.0	NGS	NGS	Guelph	518.0	9211
Union 53 Enniskillen 28-I	7312	25-Jul-88	SAL	518.0	NGS	NGS	Guelph	518.0	7915
Hadley-Midway Moore 2-13-II	7324	17-Aug-88	SAL	712.9	NPW	DH-ABD		712.9	9428
Capricorn Moore 2-14-VII	7209	23-Feb-88	SAL	719.3	NPW	OPGS-SUS	Guelph	719.3	9278
Tec. Kim-Col 55 Moore 7-16-V	7381	03-Oct-88	SAL	682.8	OBS	OBS	A-1 Carbonate	682.8	9999-00
Tec. Kim-Col 54 Moore 8-17-V	7380	18-Sep-88	SAL	731.0	OBS	OBS	A-1 Carbonate	731.0	6893-94

TABLE V-1: Continued

Well Name	Permit Number	TD Date	Target	Total Depth Metres	Class	Results	Producing Formation	Metres Drilled	Sample Tray No.
LAMBTON COUNTY Continued									
Tec. Kim-Col 57 Moore 4-18-V	7383	03-Nov-88	SAL	677.0	OBS	OBS	A-1 Carbonate	677.0	4503
Brightwest Moore 5-20-III	7317	29-Jun-88	SAL	755.0	NPW	DH-ABD		755.0	9207-08
Tec. Dow 9 Moore 1-21-XII	7294	27-Aug-88	SAL	784.5	NGS	NGS	A-1 Carb, Guelph	784.5	6891-92
Tec. Dow 6 Moore 2-21-XII	7291	31-May-88	SAL	755.0	NGS	NGS	Guelph	755.0	9200
Tec. Dow 7 Moore 2-21-XII	7292	16-Jun-88	SAL	774.0	NGS	NGS	Guelph	774.0	6897-98
Tec. Dow 8 Moore 2-21-XII	7293	03-Jul-88	SAL	780.0	NGS	NGS	Guelph	780.0	10005-6
Tec. Dow 4 Moore 6-21-XII	7290	09-Sep-88	SAL	833.0	OBS	OBS	A-1 Carbonate	833.0	9538-39
Imperial Oil 489 Mooretown 2 MacDonald 2 Moore 4-1-22-VI	7199	08-Jan-88	DEV	211.8	BD	BD	Lucas	37.5	4534
Tec. Dow 11 Moore 1-22-XII	7295	27-Aug-88	SAL	792.0	NGS	NGS	Guelph	792.0	9991-92
Tec. Dow 12 Moore 1-22-XII	7296	16-Jul-88	SAL	789.5	NGS	NGS	Guelph	789.5	10001-2
Tec. Dow 13 Moore 4-22-XII	7297	15-Aug-88	SAL	803.0	NGS	NGS	A-1 Carb, Guelph	803.0	9993-94
Tec. Dow 14 Moore 4-22-XII	7298	14-Jul-88	SAL	786.5	NGS	NGS	Guelph	786.5	10007-8
Tec. Dow 15 Moore 1-23-XII	7299	14-Aug-88	SAL	781.0	NGS	NGS	Guelph	781.0	4441
Tec. Dow 16 Moore 4-23-XII	7300	30-Jul-88	SAL	778.0	NGS	GS	Guelph	778.0	9546-47
Tec. Dow 17 Moore 4-23-XII	7301	29-Jul-88	SAL	780.2	NGS	NGS	Guelph	780.2	6895-96
DM-2 Moore 23-XII	7229	19-Mar-88	DEV	308.5	OBS	OBS		308.5	7641
DM-3 Moore 23-XII	7230	07-Mar-88	DEV	308.2	OBS	OBS		308.2	7642
Milton Res Plympton 2-12-VII	7391	12-Dec-88	SAL	784.3	NPW	DH-ABD		784.3	9252-53
Hadley-Midway Sombra 5-5-X	7325	13-Oct-88	SAL	684.3	NPW	GS-ABD		684.3	6834
Raen-Smith et al Sombra 3-8-VI	7204	18-Mar-88	SAL	609.6	DEV	OSGS-ABD	A-1 Carbonate	609.6	9414
Devran 2 Sombra 6-8-VI	7386	11-Nov-88	ORD	1189.0	NPW	DH-ABD		1189.0	9264-65
Hadley-Midway Sombra 5-11-XII	7243	21-Jun-88	SAL	672.4	NPW	GP	Guelph	672.4	9246
Raen Smith et al Sombra 4-16-IX	7316	12-Oct-88	SAL	598.0	NPW	GP	Guelph	598.0	9245
Union Terminus 14 Sombra 24-X	7139	26-Jan-88	SAL	590.0	OBS	OBS	A-1 Carbonate	590.0	9238
Hadley-Midway Sombra 2-25-XI	7205	28-Jan-88	SAL	652.3	NPW	DH-ABD		652.3	9204
Brightwest Sombra 6-27-XII	7258	18-May-88	SAL	656.0	NPW	DH-ABD		656.0	9194
Hadley-Midway Sombra 7-27-XIV	7326A	27-Oct-88	SAL	668.7	NPW	GS-ABD		668.7	9290-91
Hadley-Midway Sombra 7-27-XIV	7326	15-Sep-88	SAL	231.6	NPW	LHGS-ABD		231.6	9291
Chatham Res 6 Warwick 3-2-26-VI SER	7232	28-Jan-88	DEV	247.0	BD	OSGS-BD		12.3	7114
MIDDLESEX COUNTY									
Cons P.D. 34368 Ekfrid 4-15-R IV South	7234	19-Feb-88	CAM	1140.0	NPW	DH-ABD		1140.0	9491-92
Canex 882 McGillivray 1-9-XV	7400	03-Nov-88	SAL	513.0	NPW	GS-ABD		513.0	6621
Devran 1 North Dorchester 7-19-IV STR	7223	21-Mar-88	CAM	1083.0	NPW	DH-ABD		1083.0	9487-88
NORFOLK COUNTY									
Metalore 76 Charlotteville 7-20-III	7305	13-Aug-88	CLI	403.6	NPW	GP	Thorold, Grimsby	403.6	7022
Hemlock 12 Houghton 8-4-II	7260	23-Aug-88	CLI	449.6	NPW	GP	Thorold, Grimsby	449.6	9144
F & M 14 North Walsingham 6-14-VII	7208	03-Feb-88	CLI	402.9	DEV	GPOS	Thorold, Grimsby	402.9	9202
Bayview 17 North Walsingham 2-17-IX	7320	05-Aug-88	CLI	388.6	DEV	GP		388.6	9463
Bayview 16 North Walsingham 3-17-IX	7253	12-May-88	CLI	378.3	NPW	GP	Thorold,Grimsby	378.3	4457
Sandy 1 Townsend 2-12-XII	7416	09-Nov-88	CLI	304.8	DEV	GP	Clinton	304.8	4389
OXFORD COUNTY									
Riley Chetwynd Blandford 1-5-VII		04-May-88	CAM	890.6	DEV	OS-SUS		890.6	10073
Brett Blandford 2-7-VIII	7245	02-Jun-88	CAM	879.6	DEV	GPOS	Cambrian	879.6	9363-64
Brett Blandford 7-7-IX	7329	09-Dec-88	CAM	913.1	DEV	GP	Cambrian	913.1	9241-42
Brett Gobles #57 Blenheim 6-21-I	7164	18-Feb-88	CAM	891.2	DEV	DH-ABD		891.2	9239-40
PRINCE EDWARD COUNTY									
OGS 88-02 Prince Edward Athol 2-V-SSEL	7257	07-Apr-88	ORD	4.1	STR	STR-ABD		4.1	
OGS 88-01 Prince Edward Athol 2-V-SSEL	7256	05-Apr-88	ORD	59.4	STR	STR-ABD		59.4	

TABLE V-1: Continued

Well Name	Permit Number	TD Date	Target	Total Depth Metres	Class	Results	Producing Formation	Metres Drilled	Sample Tray No.
WELLAND COUNTY									
Champlain Wainfleet 6-17-III	7407	28-Oct-88	CLI	233.2	NPW	GP	Grimsby	233.2	5139
Dibe 1 Wainfleet 5-32-III	7247	15-Apr-88	CLI	211.8	DEV	GP	Thorold, Grimsby	211.8	5529
WENTWORTH COUNTY									
Mary Ellen Binbrook 8-1-V	7384	27-Sep-88	CLI	121.9	NPW	GP	Irondequoit	121.9	4240
Reid 1 Glanford 2-15-V	7408	12-Oct-88	CLI	137.2	NPW	GP	Whirlpool	137.2	6791

CTY Elgin TWP Aldborough BLK TRAC 1-7 LOT 5 CON IV

WELL NAME Lakewood IV 4-36 Aldborough 1-7-5-IV PERMIT 7356 INIT CLASS DEV

OPERATOR Lakewood IV Limited Partnership TARGET DEV CUR STATUS OP

DRILLING DATA

CONTRACTOR Eagle Drilling Services
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 206.4
BOT LOGGER 114.2
ROTRY TOP 2.5 DRILLER 115.3
BOT 115.2 DEEP END
DRLG FLD PLUG BK 114.2

DATES

PERMIT 1988-07-13
SPUD 1988-07-27
COMPTD 1988-07-30
OFFCNF 1988-08-29
WNKOVR
ABNDND

COORDINATES

NORTH 210.7 m
SOUTH m
EAST m
WEST 425.9 m
LAT 42 35 16
LONG 81 46 47.5

SAMPLES

TOP 76.0
BOT 113.0
TRAY 7872

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
177.8	25.3	71.0	CEM	0
114.3	14.1	115.2	CEM	0
60.3	6.9	112.0	NAH	0

COMPLETION DATA

GAS 10³m³/d
OIL NA m³/d
SIP kPa
FORM Lucas
INTRVL 112.0-113.5 m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
93.0 –	Show	NA
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
15.0 – 113.3	GRNL	SCH
84.0 – 110.0	CHPL	"
–		
–		
–		
–		

PERF ☒ OPEN HOLE ☐

REMARKS

Foot samples

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
93.0 –	NA	SUL
108.0 –	Flowing	SUL
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / SURFACE	0.0		
DRIFT / LAKE BOTTOM	2.5		
PORT LAMBTON			
KETTLE POINT			
HAMILTON			
MARCELLUS			
DUNDEE	67.0		
COLUMBUS			
LUCAS	110.0		
AMHERSTBURG			
SYLVANIA			
BOIS BLANC			
SPRINGVALE			
ONIEGANY			
BASS ISLANDS			
G SHALE			
F SHALE			
F SALT			
E CARBONATE			
D SALT/EQUIVALENT			
C SHALE			
B MARKER			
B EQUIVALENT			
B SALT			
B ANHYDRITE			
A2 CARBONATE			
A2 SALT			
A2 ANHYDRITE			
A1 CARBONATE			
A1 SALT			
A1 ANHYDRITE			
GUELPH			
ERAMOSA			
GOAT ISLAND			
GASPORT/WIARTON			
DECEW			
ROCHESTER			
IRONDEQUOIT			
REYNALES/FOSSIL HILL			
THOROLD			
GRIMSBY			
CABOT HEAD			
MANITOULIN			
WHIRLPOOL			
QUEENSTON			
BLUE MOUNTAIN - GEORG BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: Operator

CTY Elgin TWP Aldborough BLK TRAC 1-8 LOT 5 CON IV

WELL NAME Lakewood IV 1-17 Aldborough 1-8-5-IV PERMIT 7353 INIT CLASS DEV

OPERATOR Lakewood IV Limited Partnership TARGET DEV CUR STATUS OP

DRILLING DATA

CONTRACTOR Eagle Drilling Services
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 212.7
BOT LOGGER 120.0
ROTRY TOP 2.5 DRILLER 121.9
BOT 121.9 DEEP END
DRLG FLD PLUG BK 120.0

DATES

PERMIT 1988-07-13
SPUD 1988-07-20
COMPTD 1988-07-21
OFFCNF 1988-08-20
WNKOVR
ABNDND

COORDINATES

NORTH 187.3 m
SOUTH m
EAST m
WEST 150.5 m
LAT 42 30 19.5
LONG 81 46 43

SAMPLES

TOP 86.0
BOT 123.0
TRAY 6664

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
177.8	25.3	83.0	CEM	0
114.3	14.1	121.9	CEM	0

COMPLETION DATA

GAS 10³m³/d
OIL NA m³/d
SIP kPa
FORM Dundee & Columbus
INTRVL 116.0-118.0 m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
10.0 – 119.0	GRNL	SCH
80.0 – 116.9	CHPL	"
–		
–		
–		
–		

PERF ☒ OPEN HOLE ☐

REMARKS

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / SURFACE	0.0		
DRIFT / LAKE BOTTOM	2.5		
PORT LAMBTON			
KETTLE POINT			
HAMILTON			
MARCELLUS			
DUNDEE	78.5		
COLUMBUS	116.5		
LUCAS			
AMHERSTBURG			
SYLVANIA			
BOIS BLANC			
SPRINGVALE			
ONIEGANY			
BASS ISLANDS			
G SHALE			
F SHALE			
F SALT			
E CARBONATE			
D SALT/EQUIVALENT			
C SHALE			
B MARKER			
B EQUIVALENT			
B SALT			
B ANHYDRITE			
A2 CARBONATE			
A2 SALT			
A2 ANHYDRITE			
A1 CARBONATE			
A1 SALT			
A1 ANHYDRITE			
GUELPH			
ERAMOSA			
GOAT ISLAND			
GASPORT/WIARTON			
DECEW			
ROCHESTER			
IRONDEQUOIT			
REYNALES/FOSSIL HILL			
THOROLD			
GRIMSBY			
CABOT HEAD			
MANITOULIN			
WHIRLPOOL			
QUEENSTON			
BLUE MOUNTAIN - GEORG BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: Operator

T.R. Carter

CTY Elgin TWP Aldborough BLK TRAC 1-6 LOT 6 CON IV
WELL NAME Lakewood IV 2-14 Aldborough 1-6-6-IV PERMIT 7355 INIT CLASS DEV
OPERATOR TARGET DEV CUR STATUS OP

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	Eagle Drilling Services			PERMIT	1988-07-13	NORTH	593.0	m	TOP	86.0
RIG TYPE	Rotary	DEPTHS		SPUD	1988-07-22	SOUTH		m	BOT	125.0
CABLE TOP		KB ELEV	213.1	COMPTD	1988-07-24	EAST	171.4	m	TRAY	7870
BOT		LOGGER	131.8	OFFCNF	1988-08-23	WEST		m		
ROTRY TOP	2.5	DRILLER	134.5	WRKOVR		LAT	42 35 36.5			
BOT	134.5	DEEP END		ABNDND		LONG	81 44 40			
DRLG FLD		PLUG BK	131.8							

INITIAL GAS RECORD

INTERVAL		FLOW	SIP
–			
–			
–			
–			
–			
–			

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
177.8	25.3	83.1	CEM	0
114.3	14.1	134.1	CEM	0

COMPLETION DATA

GAS		$10^3 m^3/d$
OIL	NA	m^3/d
SIP		kPa
FORM	Dundee	
INTRVL	124.5-126.0	m
		m
		m

INITIAL OIL RECORD

INTERVAL		FLOW	DENSITY
–			
–			
–			
–			
–			
–			

LOGGING RECORD

INTERVAL		TYPE	COMPANY
15.0	– 131.0	GRNL	SCH
95.0	– 128.0	CMPL	"
	–		
	–		
	–		
	–		
	–		

PERF ☒ OPEN HOLE ☐

REMARKS

INITIAL WATER RECORD

INTERVAL		STAT LEV	TYPE
119.0	–	NA	SUL
	–		
	–		
	–		
	–		
	–		

CORING RECORD

INTERVAL		LOCATION	NO	mm
	–			
	–			
	–			
	–			
	–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB (MARKER BED)	0.0		
DRIFT (SURFACE/BOTTOM)	2.5		
PORT LAMBTON			
KETTLE POINT			
HAMILTON			
MARCELLUS			
DUNDEE	74.5		
COLUMBUS			
LUCAS	126.0		
AMHERSTBURG			
SYLVANIA			
BOIS BLANC			
SPRINGVALE			
ORISKANY			
BASS ISLANDS			
G SHALE			
F SHALE			
F SALT			
E CARBONATE			
D SALT/EQUIVALENT			
C SHALE			
B MARKER			
B EQUIVALENT			
B SALT			
B ANHYDRITE			
A2 CARBONATE			
A2 SALT			
A2 ANHYDRITE			
A1 CARBONATE			
A1 SALT			
A1 ANHYDRITE			
GUELPH			
ERAMOSA			
GOAT ISLAND			
GASPORT/WIARTON			
DECEW			
ROCHESTER			
IRONDEQUOIT			
REYNALES/FOSSIL HILL			
THOROLD			
GRIMSBY			
CABOT HEAD			
MANITOULIN			
WHIRLPOOL			
QUEENSTON			
BLUE MOUNTAIN - GEORG. BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: Operator

CTY Elgin TWP Aldborough BLK TRAC 2-4 LOT 5 CON V
WELL NAME Lakewood IV 5-32 Aldborough 2-4-5-V PERMIT 7333 INIT CLASS DEV
OPERATOR Lakewood IV Limited Partnership TARGET DEV CUR STATUS OP

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	Eagle Drilling Service			PERMIT	1988-07-08	NORTH		m	TOP	84.0
RIG TYPE	Rotary	DEPTHS		SPUD	1988-08-04	SOUTH	401.4	m	BOT	116.5
CABLE TOP		KB ELEV	213.3	COMPTD	1988-08-05	EAST		m	TRAY	6664
BOT		LOGGER	119.0	OFFCNF	1988-09-05	WEST	165.6	m		
ROTRY TOP	2.5	DRILLER	120.0	WRKOVR		LAT	42 35 04			
BOT	120.0	DEEP END		ABNDND		LONG	81 44 19.5			
DRLG FLD		PLUG BK	119.0							

INITIAL GAS RECORD

INTERVAL		FLOW	SIP
–			
–			
–			
–			
–			
–			

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
177.8	25.3	82.0	CEM	0
114.3	14.1	120.0	CEM	0
60.3	6.9	114.0	HAN	0

COMPLETION DATA

GAS		$10^3 m^3/d$
OIL	NA	m^3/d
SIP		kPa
FORM	Columbus	
INTRVL	114.5-117.0	m
		m
		m

INITIAL OIL RECORD

INTERVAL		FLOW	DENSITY
–			
–			
–			
–			
–			
–			

LOGGING RECORD

INTERVAL		TYPE	COMPANY
15.0	– 118.2	GRNL	SCH
75.0	– 115.0	CMPL	"
	–		
	–		
	–		
	–		
	–		

PERF ☒ OPEN HOLE ☐

REMARKS

INITIAL WATER RECORD

INTERVAL		STAT LEV	TYPE
–			
–			
–			
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–			
–			

CORING RECORD

INTERVAL		LOCATION	NO	mm
	–			
	–			
	–			
	–			
	–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB (MARKER BED)	0.0		
DRIFT (SURFACE/BOTTOM)	2.5		
PORT LAMBTON			
KETTLE POINT			
HAMILTON			
MARCELLUS			
DUNDEE	75.2		
COLUMBUS	112.0		
LUCAS			
AMHERSTBURG			
SYLVANIA			
BOIS BLANC			
SPRINGVALE			
ORISKANY			
BASS ISLANDS			
G SHALE			
F SHALE			
F SALT			
E CARBONATE			
D SALT/EQUIVALENT			
C SHALE			
B MARKER			
B EQUIVALENT			
B SALT			
B ANHYDRITE			
A2 CARBONATE			
A2 SALT			
A2 ANHYDRITE			
A1 CARBONATE			
A1 SALT			
A1 ANHYDRITE			
GUELPH			
ERAMOSA			
GOAT ISLAND			
GASPORT/WIARTON			
DECEW			
ROCHESTER			
IRONDEQUOIT			
REYNALES/FOSSIL HILL			
THOROLD			
GRIMSBY			
CABOT HEAD			
MANITOULIN			
WHIRLPOOL			
QUEENSTON			
BLUE MOUNTAIN - GEORG. BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: Operator

CTY Elgin TWP Aldborough BLK TRAC 4-6 LOT 5 CON V

WELL NAME Lakewood IV 5-35 Aldborough 4-6-5-V PERMIT 7336 INIT CLASS DEV

OPERATOR Lakewood IV Limited Partnership TARGET DEV CUR STATUS OP

DRILLING DATA				DATES		COORDINATES		SAMPLES	
CONTRACTOR	Eagle Drilling Services			PERMIT	1988-07-08	NORTH	m	TOP	83.1
RIG TYPE	Rotary	DEPTHS		SPUD	1988-07-13	SOUTH	907.0 m	BOT	115.5
CABLE TOP		KB ELEV	214.2	COMPTD	1988-08-22	EAST	m	TRAY	7870
BOT		LOGGER	116.0	OFFCNF	1988-09-21	WEST	299.5 m		
ROTRY TOP	3.5	DRILLER	120.5	WRKOVR		LAT	42 34 49.5		
BOT	120.5	DEEP END		ABNOND		LONG	81 44 08.5		
DRLG FLD		PLUG BK							

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
177.8	25.3	82.0	CEM	0
114.3	14.1	116.0	CEM	0
60.3	7.0	115.0	NA	NA

COMPLETION DATA

GAS		$10^3 m^3/d$
OIL	0.4	m^3/d
SIP		kPa
FORM	Dundee & Lucas	
INTRVL	114.0-120.5	m
		m
		m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
15.0 – 114.3	GRNL	SCH
85.0 – 112.0	CHFL	"
–		
–		
–		
–		
–		

PERF ☒ OPEN HOLE ☐

REMARKS

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
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–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB /DATUM INDEX	0.0		
DRIFT / LAKE BOTTOM	3.5		
DEVONIAN: PORT LAMBTON			
DEVONIAN: KETTLE POINT			
DEVONIAN: HAMILTON			
DEVONIAN: MARCELLUS			
DEVONIAN: DUNDEE	75.0		
DEVONIAN: COLUMBUS			
DEVONIAN: LUCAS	115.5		
DEVONIAN: AMHERSTBURG			
DEVONIAN: SYLVANIA			
DEVONIAN: BOIS BLANC			
DEVONIAN: SPRINGVALE			
DEVONIAN: ORISKANY			
SILURIAN: BASS ISLANDS			
SILURIAN: G SHALE			
SILURIAN: F SHALE			
SILURIAN: F SALT			
SILURIAN: E CARBONATE			
SILURIAN: D SALT/EQUIVALENT			
SILURIAN: C SHALE			
SILURIAN: B MARKER			
SILURIAN: B EQUIVALENT			
SILURIAN: B SALT			
SILURIAN: B ANHYDRITE			
SILURIAN: A2 CARBONATE			
SILURIAN: A2 SALT			
SILURIAN: A2 ANHYDRITE			
SILURIAN: A1 CARBONATE			
SILURIAN: A1 SALT			
SILURIAN: A1 ANHYDRITE			
SILURIAN: GUELPH			
SILURIAN: ERAMOSA			
SILURIAN: GOAT ISLAND			
SILURIAN: GASPORT/AMHERSTON			
SILURIAN: DECEW			
SILURIAN: ROCHESTER			
SILURIAN: IRONDEQUOIT			
SILURIAN: REYNALES/POSSIL HILL			
SILURIAN: THOROLD			
SILURIAN: GRIMSBY			
SILURIAN: CABOT HEAD			
SILURIAN: MANITOULIN			
SILURIAN: WHIRLPOOL			
ORDOVICIAN: QUEENSTON			
ORDOVICIAN: BLUE MOUNTAIN - GEORG BAY			
ORDOVICIAN: COLLINGWOOD			
ORDOVICIAN: COBOURG			
ORDOVICIAN: VERULAM			
ORDOVICIAN: KIRKFIELD			
ORDOVICIAN: COBOCONK			
ORDOVICIAN: GULL RIVER			
ORDOVICIAN: SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: Operator

CTY Elgin TWP Aldborough BLK TRAC 4-3 LOT 5 CON V

WELL NAME Lakewood IV 5-33 Aldborough 4-3-5-V PERMIT 7334 INIT CLASS DEV

OPERATOR Lakewood IV Limited Partnership TARGET DEV CUR STATUS OP

DRILLING DATA				DATES		COORDINATES		SAMPLES	
CONTRACTOR	Eagle Drilling Services			PERMIT	1988-07-08	NORTH	m	TOP	89.0
RIG TYPE	Rotary	DEPTHS		SPUD	1988-07-08	SOUTH	559.4 m	BOT	119.0
CABLE TOP		KB ELEV	214.0	COMPTD	1988-07-11	EAST	m	TRAY	7870
BOT		LOGGER	118.3	OFFCNF	1988-08-10	WEST	301.1 m		
ROTRY TOP	2.5	DRILLER	118.4	WRKOVR		LAT	42 34 58		
BOT	118.4	DEEP END		ABNOND		LONG	81 44 19		
DRLG FLD		PLUG BK	117.0						

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
177.8	25.3	84.0	CEM	0
114.3	14.1	118.4	CEM	0
60.3	7.0	112.0	HAN	0

COMPLETION DATA

GAS		$10^3 m^3/d$
OIL	NA	m^3/d
SIP		kPa
FORM	Lucas	
INTRVL	92.5-93.5	m
	112.5-114.5	m
		m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
93.5 –	Show	NA
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
15.0– 116.2	GRNL	SCH
15.0– 114.9	CBVD	"
15.0– 114.9	CHFL	"
–		
–		
–		
–		

PERF ☒ OPEN HOLE ☐

REMARKS

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
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–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
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–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB /DATUM INDEX	0.0		
DRIFT / LAKE BOTTOM	2.5		
DEVONIAN: PORT LAMBTON			
DEVONIAN: KETTLE POINT			
DEVONIAN: HAMILTON			
DEVONIAN: MARCELLUS			
DEVONIAN: DUNDEE	75.0		
DEVONIAN: COLUMBUS			
DEVONIAN: LUCAS	112.0		
DEVONIAN: AMHERSTBURG			
DEVONIAN: SYLVANIA			
DEVONIAN: BOIS BLANC			
DEVONIAN: SPRINGVALE			
DEVONIAN: ORISKANY			
SILURIAN: BASS ISLANDS			
SILURIAN: G SHALE			
SILURIAN: F SHALE			
SILURIAN: F SALT			
SILURIAN: E CARBONATE			
SILURIAN: D SALT/EQUIVALENT			
SILURIAN: C SHALE			
SILURIAN: B MARKER			
SILURIAN: B EQUIVALENT			
SILURIAN: B SALT			
SILURIAN: B ANHYDRITE			
SILURIAN: A2 CARBONATE			
SILURIAN: A2 SALT			
SILURIAN: A2 ANHYDRITE			
SILURIAN: A1 CARBONATE			
SILURIAN: A1 SALT			
SILURIAN: A1 ANHYDRITE			
SILURIAN: GUELPH			
SILURIAN: ERAMOSA			
SILURIAN: GOAT ISLAND			
SILURIAN: GASPORT/AMHERSTON			
SILURIAN: DECEW			
SILURIAN: ROCHESTER			
SILURIAN: IRONDEQUOIT			
SILURIAN: REYNALES/POSSIL HILL			
SILURIAN: THOROLD			
SILURIAN: GRIMSBY			
SILURIAN: CABOT HEAD			
SILURIAN: MANITOULIN			
SILURIAN: WHIRLPOOL			
ORDOVICIAN: QUEENSTON			
ORDOVICIAN: BLUE MOUNTAIN - GEORG BAY			
ORDOVICIAN: COLLINGWOOD			
ORDOVICIAN: COBOURG			
ORDOVICIAN: VERULAM			
ORDOVICIAN: KIRKFIELD			
ORDOVICIAN: COBOCONK			
ORDOVICIAN: GULL RIVER			
ORDOVICIAN: SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

T.R. Carter

CTY	Elgin	TWP	Aldborough	BLK		TRAC	3-4	LOT	5	CON	V
WELL NAME	Lakewood IV 5-37 Aldborough 3-4-5-V			PERMIT	7375	INIT CLASS	DEV				
OPERATOR	Lakewood IV Limited Partnership			TARGET	DEV	CUR STATUS	OP				

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	Eagle Drilling Services			PERMIT	1988-08-17	NORTH	m	TOP	83.0	
RIG TYPE	Rotary	DEPTHS		SPUD	1988-08-15	SOUTH	553.7 m	BOT	110.0	
CABLE TOP		KB ELEV	214.1	COMPTD	1988-08-16	EAST	m	TRAY	7865	
BOT		LOGGER	121.0	OFFCNF	1988-09-15	WEST	174.2 m			
ROTRY TOP	2.5	DRILLER	121.0	WRKOVR		LAT	42 35 29			
BOT	121.0	DEEP END		ABNDND		LONG	81 44 50.5			
DRLG FLD		PLUG BK	121.0							

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS	$10^3 m^3/d$
–			177.8	25.3	80.5	CEM	0	OIL 2.6	m^3/d
–			114.1	14.1	121.0	CEM	0	SIP	kPa
–			60.3	6.9	NA	HAN	0	FORM Lucas	
–								INTRVL 114.7-117.7	m
–									m
–									m

INITIAL OIL RECORD			LOGGING RECORD			PERF ☒	OPEN HOLE ☐
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	REMARKS	
113.5 –	NA	NA	5.0 – 121.0	GRNL	SCH		
–			80.0 – 117.0	CMPL	"		
–			–				
–			–				
–			–				

INITIAL WATER RECORD			CORING RECORD			
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	mm
113.5–	NA	NA	–			
–			–			
–			–			
–			–			
–			–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / ~~TUSCARORA~~	0.0		
	DRIFT / ~~QUEENSTON~~	2.5		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON			
	MARCELLUS			
	DUNDEE	75.0		
	COLUMBUS			
	LUCAS	114.5		
	AMHERSTBURG			
	SYLVANIA			
	BOIS BLANC			
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS			
	G SHALE			
	F SHALE			
	F SALT			
	E CARBONATE			
	D SALT/EQUIVALENT			
	C SHALE			
	B MARKER			
	B EQUIVALENT			
	B SALT			
	B ANHYDRITE			
	A2 CARBONATE			
	A2 SALT			

SILURIAN	A2 ANHYDRITE		
	A1 CARBONATE		
	A1 SALT		
	A1 ANHYDRITE		
	GUELPH		
	ERAMOSA		
	GOAT ISLAND		
	GASPORT/WIARTON		
	DECEW		
	ROCHESTER		
	IRONDEQUOIT		
	REYNALES/FOSSIL HILL		
	THOROLD		
	GRIMSBY		
	CABOT HEAD		
	MANITOULIN		
ORDOVICIAN	WHIRLPOOL		
	QUEENSTON		
	BLUE MOUNTAIN - GEORG. BAY		
	COLLINGWOOD		
	COBOURG		
	VERULAM		
	KIRKFIELD		
	COBOCONK		
	GULL RIVER		
	SHADOW LAKE		
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: Operator

CTY	Elgin	TWP	Aldborough	BLK		TRAC	2-5	LOT	5	CON	V
WELL NAME	Lakewood IV 6-20 Aldborough 2-5-5-V			PERMIT	7376	INIT CLASS	DEV				
OPERATOR	Lakewood IV Limited Partnership			TARGET	DEV	CUR STATUS	OP				

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	Eagle Drilling			PERMIT	1988-08-17	NORTH	m	TOP	86.0	
RIG TYPE	Rotary	DEPTHS		SPUD	1988-08-16	SOUTH	718.7 m	BOT	116.5	
CABLE TOP		KB ELEV	213.9	COMPTD	1988-08-17	EAST	m	TRAY	6689	
BOT		LOGGER	120.3	OFFCNF	1988-09-16	WEST	171.8 m			
ROTRY TOP		DRIL FR	121.9	WRKOVR		LAT	42 35 25			
BOT		DEEP END		ABNDND		LONG	81 44 46			
DRLG FLD		PLUG BK	120.3							

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS	$10^3 m^3/d$
–			177.8	25.3	81.0	CEM	0	OIL 5.8	m^3/d
–			114.1	14.1	121.9	CEM	0	SIP	kPa
–			60.3	6.9	115.0	HAN	0	FORM Lucas	
–								INTRVL 115.5-117.5	m
–									m
–									m

INITIAL OIL RECORD			LOGGING RECORD			PERF ☒	OPEN HOLE ☐
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	REMARKS	
116.5 –	Show	NA	10.0 – 119.6	GRNL	SCH		
–			80.0 – 116.2	CMPL	"		
–			–				
–			–				
–			–				

INITIAL WATER RECORD			CORING RECORD			
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	mm
116.5 –	NA	SWL	–			
–			–			
–			–			
–			–			
–			–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / ~~LAKE ERIE~~	0.0		
	DRIFT / ~~ALDER RIDGE~~	2.5		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON			
	MARCELLUS			
	DUNDEE	76.0		
	COLUMBUS			
	LUCAS	115.3		
	AMHERSTBURG			
	SYLVANIA			
	BOIS BLANC			
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS			
	G SHALE			
	F SHALE			
	F SALT			
	E CARBONATE			
	D SALT/EQUIVALENT			
	C SHALE			
	B MARKER			
	B EQUIVALENT			
	B SALT			
	B ANHYDRITE			
	A2 CARBONATE			
	A2 SALT			

SILURIAN	A2 ANHYDRITE		
	A1 CARBONATE		
	A1 SALT		
	A1 ANHYDRITE		
	GUELPH		
	ERAMOSA		
	GOAT ISLAND		
	GASPORT/WIARTON		
	DECEW		
	ROCHESTER		
	IRONDEQUOIT		
	REYNALES/FOSSIL HILL		
	THOROLD		
	GRIMSBY		
	CABOT HEAD		
	MANITOULIN		
ORDOVICIAN	WHIRLPOOL		
	QUEENSTON		
	BLUE MOUNTAIN - GEORG. BAY		
	COLLINGWOOD		
	COBOURG		
	VERULAM		
	KIRKFIELD		
	COBOCONK		
	GULL RIVER		
	SHADOW LAKE		
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: Operator

CTY Elgin TWP Aldborough BLK TRAC 3-5 LOT 5 CON V

WELL NAME Lakewood IV 6-19 Aldborough 3-5-5-V PERMIT 7337 INIT CLASS DEV

OPERATOR Lakewood IV Limited Partnership TARGET DEV CUR STATUS OP

DRILLING DATA

CONTRACTOR Eagle Drilling Services

RIG TYPE Rotary DEPTHS

CABLE TOP KB ELEV 214.0

BOT LOGGER 119.6

ROTRY TOP 2.5 DRILLER 121.6

BOT 121.6 DEEP END

DRLG FLD PLUG BK

DATES

PERMIT 1988-07-08

SPUD 1988-07-18

COMPTD 1988-07-20

OFFCHF 1988-08-19

WRKOVR

ABNDND

COORDINATES

NORTH m

SOUTH 898.7 m

EAST m

WEST 150.7 m

LAT 42 34 53

LONG 82 44 06

SAMPLES

TOP 86.0

BOT 122.0

TRNY 7870

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
177.8	25.3	83.0	CEM	0
114.3	14.1	121.6	CEM	0

COMPLETION DATA

GAS $10^3 m^3/d$

OIL NA m^3/d

SIP kPa

FORM Lucas

INTRVL 116.0–118.0 m

m

m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
8.0 – 118.8	GR/NL	SCH
65.0 – 115.9	CN/FL	"
–		
–		
–		
–		
–		

PERF ☑ OPEN HOLE ☐

REMARKS

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	min
–			
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB [illegible]	0.0		
DRIFT [illegible]	2.5		
DEVONIAN: PORT LAMBTON			
KETTLE POINT			
HAMILTON			
MARCELLUS			
DUNDEE	78.0		
COLUMBUS			
LUCAS	116.0		
AMHERSTBURG			
SYLVANIA			
BOIS BLANC			
SPRINGVALE			
ORISKANY			
SILURIAN: BASS ISLANDS			
G SHALE			
F SHALE			
F SALT			
E CARBONATE			
D SALT/EQUIVALENT			
C SHALE			
B MARKER			
B EQUIVALENT			
B SALT			
B ANHYDRITE			
A2 CARBONATE			
A2 SALT			

SILURIAN: A2 ANHYDRITE			
A1 CARBONATE			
A1 SALT			
A1 ANHYDRITE			
GUELPH			
ERAMOSA			
GOAT ISLAND			
GASPORT/WARTON			
DECEW			
ROCHESTER			
IRONDEQUOIT			
REYNALES/FOSSIL HILL			
THOROLD			
GRIMSBY			
CABOT HEAD			
MANITOULIN			
WHIRLPOOL			
ORDOVICIAN: QUEENSTON			
BLUE MOUNTAIN - GEORG. BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: Operator

CTY Elgin TWP Aldborough BLK TRAC 2-5 LOT 5 CON V

WELL NAME Lakewood IV 5-34 Aldborough 2-5-5-V PERMIT 7335 INIT CLASS DEV

OPERATOR Lakewood IV Limited Partnership TARGET DEV CUR STATUS OP

DRILLING DATA

CONTRACTOR Eagle Drilling Services

RIG TYPE Rotary DEPTHS

CABLE TOP KB ELEV 214.2

BOT LOGGER 121.8

ROTRY TOP 2.5 DRILLER 122.7

BOT 122.7 DEEP END

DRLG FLD PLUG BK 121.4

DATES

PERMIT 1988-07-08

SPUD 1988-08-02

COMPTD 1988-08-03

OFFCHF 1988-09-02

WRKOVR

ABNDND

COORDINATES

NORTH m

SOUTH 720.0 m

EAST m

WEST 295.6 m

LAT 42 34 54

LONG 81 44 14

SAMPLES

TOP 83.0

BOT 116.0

TRNY 7865

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
177.8	25.3	81.0	CEM	0
114.1	14.1	122.7	CEM	0
60.3	6.9	NA	HAN	0

COMPLETION DATA

GAS $10^3 m^3/d$

OIL .76 m^3/d

SIP kPa

FORM Lucas

INTRVL 114.5–117.5 m

m

m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
96.0–	Show	NA
119.0–	NA	NA
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
10.0 – 121.0	GR/NL	SCH
80.0 – 117.4	CN/FL	"
–		
–		
–		
–		
–		

PERF ☑ OPEN HOLE ☐

REMARKS

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
96.0–	NA	NA
119.0–	NA	NA
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	min
–			
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB [illegible]	0.0		
DRIFT [illegible]	2.5		
DEVONIAN: PORT LAMBTON			
KETTLE POINT			
HAMILTON			
MARCELLUS			
DUNDEE	75.0		
COLUMBUS			
LUCAS	114.2		
AMHERSTBURG			
SYLVANIA			
BOIS BLANC			
SPRINGVALE			
ORISKANY			
SILURIAN: BASS ISLANDS			
G SHALE			
F SHALE			
F SALT			
E CARBONATE			
D SALT/EQUIVALENT			
C SHALE			
B MARKER			
B EQUIVALENT			
B SALT			
B ANHYDRITE			
A2 CARBONATE			
A2 SALT			

SILURIAN: A2 ANHYDRITE			
A1 CARBONATE			
A1 SALT			
A1 ANHYDRITE			
GUELPH			
ERAMOSA			
GOAT ISLAND			
GASPORT/WARTON			
DECEW			
ROCHESTER			
IRONDEQUOIT			
REYNALES/FOSSIL HILL			
THOROLD			
GRIMSBY			
CABOT HEAD			
MANITOULIN			
WHIRLPOOL			
ORDOVICIAN: QUEENSTON			
BLUE MOUNTAIN - GEORG. BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: Operator

CTY Elgin TWP Aldborough BLK TRAC 2-6 LOT 5 CON V

WELL NAME Lakewood IV 5-31 Aldborough 2-4-5-V PERMIT 7332 INIT CLASS DEV

OPERATOR Lakewood IV Limited Partnership TARGET DEV CUR STATUS OP

DRILLING DATA

CONTRACTOR Eagle Drilling Co.

RIG TYPE Rotary DEPTHS

CABLE TOP		KB ELEV	213.0
BOT		LOGGER	117.5
ROTRY TOP	2.5	DRILLER	118.3
BOT	118.3	DEEP END	
DRLG FLD		PLUG BK	117.5

DATES

PERMIT	1988-07-08
SPUD	1988-08-08
COMPTD	1988-08-09
OFFCNF	1988-09-08
WRKOVR	
ABNOND	

COORDINATES

NORTH		m
SOUTH	397.4	m
EAST		m
WEST	287.2	m
LAT	42 35 01.5	
LONG	81 44 24	

SAMPLES

TOP	83.0
BOT	119.0
TRAY	6664

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
177.8	25.4	80.0	CEM	0
114.3	14.1	118.3	CEM	0
60.3	6.9	114.0	HAN	0

COMPLETION DATA

GAS		10 ^{3}m^3/d
OIL	NA	m^3/d
SIP		kPa
FORM	Lucas	
INTRVL	114.0–117.0	m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
94.0 –	Show	NA
113.0 –	Show	NA
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
15.0 – 116.8	GRNL	SCH
80.0 – 113.4	CMPL	"
–		
–		
–		
–		

PERF ☑ OPEN HOLE ☐

REMARKS

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
94.0 –	NA	SUL
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS

		TOP	ELEV	THICK
	KB [illegible]			
	DRIFT [illegible]	0.0		
DEVONIAN	PORT LAMBTON	2.5		
	KETTLE POINT			
	HAMILTON			
	MARCELLUS			
	DUNDEE			
	COLUMBUS	76.0		
	LUCAS	113.4		
	AMHERSTBURG			
	SYLVANIA			
	BOIS BLANC			
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS			
	G SHALE			
	F SHALE			
	F SALT			
	E CARBONATE			
	D SALT/EQUIVALENT			
	C SHALE			
	B MARKER			
	B EQUIVALENT			
	B SALT			
	B ANHYDRITE			
	A2 CARBONATE			
	A2 SALT			

A2 ANHYDRITE	
A1 CARBONATE	
A1 SALT	
A1 ANHYDRITE	
GUELPH	
ERAMOSA	
GOAT ISLAND	
GASPORT/WARTON	
DECEW	
ROCHESTER	
IRONDEQUOIT	
REYNALES/FOSSIL HILL	
THOROLD	
GRIMSBY	
CABOT HEAD	
MANITOULIN	
WHIRLPOOL	
QUEENSTON	
BLUE MOUNTAIN - GEORG. BAY	
COLLINGWOOD	
COBOURG	
VERULAM	
KIRKFIELD	
COBOCONK	
GULL RIVER	
SHADOW LAKE	
CAMBRIAN	
PRECAMBRIAN	

ORDOVICIAN

GEOLOGY BY: Operator

CTY Elgin TWP Aldborough BLK TRAC 2-7 v LOT 6 CON IV

WELL NAME Lakewood IV 2-15 Aldborough 2-7-6-IV PERMIT 7354 INIT CLASS DEV

OPERATOR Lakewood IV Limited Partnership TARGET DEV CUR STATUS OP

DRILLING DATA

CONTRACTOR Eagle Drilling Services

RIG TYPE Rotary DEPTHS

CABLE TOP		KB ELEV	204.0
BOT		LOGGER	112.9
ROTRY TOP	2.5	DRILLER	113.8
BOT	113.8	DEEP END	
DRLG FLD		PLUG BK	113.0

DATES

PERMIT	1988-07-13
SPUD	1988-07-26
COMPTD	1988-07-27
OFFCNF	1988-08-26
WRKOVR	
ABNOND	

COORDINATES

NORTH	177.3	m
SOUTH		m
EAST	12.0	m
WEST		m
LAT	42 35 23	
LONG	81 44 32.5	

SAMPLES

TOP	80.0
BOT	113.5
TRAY	7865

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
177.8	25.3	76.0	CEM	0
114.3	14.1	113.7	CEM	0

COMPLETION DATA

GAS		10 ^{3}m^3/d
OIL	NA	m^3/d
SIP		kPa
FORM	Lucas	
INTRVL	108.0–110.0	m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
15.0 – 112.1	GRNL	SCH
70.0 – 109.9	CMPL	"
–		
–		
–		
–		

PERF ☑ OPEN HOLE ☐

REMARKS

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS

		TOP	ELEV	THICK
	KB [illegible]			
	DRIFT [illegible]	0.0		
DEVONIAN	PORT LAMBTON	2.5		
	KETTLE POINT			
	HAMILTON			
	MARCELLUS			
	DUNDEE			
	COLUMBUS	70.0		
	LUCAS	108.0		
	AMHERSTBURG			
	SYLVANIA			
	BOIS BLANC			
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS			
	G SHALE			
	F SHALE			
	F SALT			
	E CARBONATE			
	D SALT/EQUIVALENT			
	C SHALE			
	B MARKER			
	B EQUIVALENT			
	B SALT			
	B ANHYDRITE			
	A2 CARBONATE			
	A2 SALT			

A2 ANHYDRITE	
A1 CARBONATE	
A1 SALT	
A1 ANHYDRITE	
GUELPH	
ERAMOSA	
GOAT ISLAND	
GASPORT/WARTON	
DECEW	
ROCHESTER	
IRONDEQUOIT	
REYNALES/FOSSIL HILL	
THOROLD	
GRIMSBY	
CABOT HEAD	
MANITOULIN	
WHIRLPOOL	
QUEENSTON	
BLUE MOUNTAIN - GEORG. BAY	
COLLINGWOOD	
COBOURG	
VERULAM	
KIRKFIELD	
COBOCONK	
GULL RIVER	
SHADOW LAKE	
CAMBRIAN	
PRECAMBRIAN	

ORDOVICIAN

GEOLOGY BY: Operator

CTY Elgin TWP Aldborough BLK TRAC 4-6 LOT 6 CON IV

WELL NAME Lakewood IV 2-16 Aldborough 4-6-6-IV PERMIT 7374 INIT CLASS DEV

OPERATOR Lakewood IV Limited Partnership TARGET DEV CUR STATUS OP

DRILLING DATA

CONTRACTOR Eagle Drilling Services
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 213.2
BOT LOGGER 130.7
ROTRY TOP 2.5 DRILLER 132.4
BOT 132.6 DEEP END
DRLG FLD PLUG BK 130.7

DATES

PERMIT 1988-08-17
SPUD 1988-08-18
COMPTD 1988-08-19
OFFCNF 1988-09-18
WRKOVR
ABNDND

COORDINATES

NORTH 397.5 m
SOUTH m
EAST 163.5 m
WEST m
LAT 42 35 31.5
LONG 81 44 40

SAMPLES

TOP 86.0
BOT 134.0
TRAY 7878

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
177.8	25.3	85.0	CEM	0
114.1	14.1	132.4	CEM	0
60.3	6.9	122.0	HAN	0

COMPLETION DATA

GAS $10^3 m^3/d$
OIL 2.02 m^3/d
SIP kPa
FORM Lucas
INTRVL 122.4–124.9 m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
125.0 –	Show	NA
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
3.0 – 129.7	GRNL	SCH
90.0 – 126.4	CMPL	"
–		
–		
–		
–		

PERF ☑ OPEN HOLE ☐

REMARKS

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
125.0 –	NA	SUL
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	min
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS

		TOP	ELEV	THICK
	KB / LAKE LEVEL	0.0		
	DRIFT / LAKE BOTTOM	2.5		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON			
	MARCELLUS			
	DUNDEE	82.0		
	COLUMBUS			
	LUCAS	122.3		
	AMHERSTBURG			
	SYLVANIA			
	BOIS BLANC			
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS			
	G SHALE			
	F SHALE			
	F SALT			
	E CARBONATE			
	D SALT/EQUIVALENT			
	C SHALE			
	B MARKER			
	B EQUIVALENT			
	B SALT			
	B ANHYDRITE			
	A2 CARBONATE			
	A2 SALT			

		TOP	ELEV	THICK
SILURIAN	A2 ANHYDRITE			
	A1 CARBONATE			
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH			
	ERAMOSA			
	GOAT ISLAND			
	GASPORT/WARTON			
	DECEW			
	ROCHESTER			
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL			
	THOROLD			
	GRIMSBY			
	CABOT HEAD			
	MANITOULIN			
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON			
	BLUE MOUNTAIN - GEORG. BAY			
	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
CAMBRIAN				
PRECAMBRIAN				

GEOLOGY BY: Operator

CTY Elgin TWP Aldborough BLK TRAC 1-6 LOT 6 CON V

WELL NAME Lakewood IV 7-22 Aldborough 1-6-6-V PERMIT 7338 INIT CLASS DEV

OPERATOR Lakewood IV Limited Partnership TARGET DEV CUR STATUS OP

DRILLING DATA

CONTRACTOR Eagle Drilling Services
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 214.2
BOT LOGGER 124.5
ROTRY TOP 2.5 DRILLER 126.6
BOT 126.6 DEEP END
DRLG FLD PLUG BK 124.5

DATES

PERMIT 1988-07-08
SPUD 1988-08-09
COMPTD 1988-08-10
OFFCNF 1988-09-09
WRKOVR
ABNDND

COORDINATES

NORTH m
SOUTH 731.9 m
EAST 157.1 m
WEST m
LAT 42 35 03
LONG 81 43 59.5

SAMPLES

TOP 86.0
BOT 116.5
TRAY 6664

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
177.8	25.3	83.0	CEM	0
114.1	14.1	126.6	CEM	0
60.3	6.9	124.0	HAN	0

COMPLETION DATA

GAS $10^3 m^3/d$
OIL NA m^3/d
SIP kPa
FORM Lucas
INTRVL 121.0–124.0 m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
122.0 –	NA	NA
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
15.0 – 123.7	GRNL	SCH
90.0 – 120.3	CMPL	"
–		
–		
–		
–		

PERF ☑ OPEN HOLE ☐

REMARKS

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
116.5 –	NA	SUL
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	min
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS

		TOP	ELEV	THICK
	KB / LAKE LEVEL	0.0		
	DRIFT / LAKE BOTTOM	2.5		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON			
	MARCELLUS			
	DUNDEE	77.2		
	COLUMBUS			
	LUCAS	121.0		
	AMHERSTBURG			
	SYLVANIA			
	BOIS BLANC			
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS			
	G SHALE			
	F SHALE			
	F SALT			
	E CARBONATE			
	D SALT/EQUIVALENT			
	C SHALE			
	B MARKER			
	B EQUIVALENT			
	B SALT			
	B ANHYDRITE			
	A2 CARBONATE			
	A2 SALT			

		TOP	ELEV	THICK
SILURIAN	A2 ANHYDRITE			
	A1 CARBONATE			
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH			
	ERAMOSA			
	GOAT ISLAND			
	GASPORT/WARTON			
	DECEW			
	ROCHESTER			
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL			
	THOROLD			
	GRIMSBY			
	CABOT HEAD			
	MANITOULIN			
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON			
	BLUE MOUNTAIN - GEORG. BAY			
	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
CAMBRIAN				
PRECAMBRIAN				

GEOLOGY BY: Operator

T.R. Carter

CTY	Elgin	TWP	Aldborough	BLK		TRAC	1-6	LOT	6	CON	V
WELL NAME	Lakewood IV 7-23 Aldborough 1-6-6-V					PERMIT	7339	INIT CLASS		DEV	
OPERATOR	Lakewood IV Limited Partnership					TARGET	DEV	CUR STATUS		OP	

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	Eagle Drilling Services			PERMIT	1988-07-08	NORTH		m	TOP	86.0
RIG TYPE	Rotary	DEPTHS		SPUD	1988-08-11	SOUTH	886.5	m	BOT	119.5
CABLE TOP		KB ELEV	212.5	COMPTD	1988-08-12	EAST	155.3	m	TRAY	6664
BOT		LOGGER	127.0	OFFCNF	1988-09-11	WEST		m		
ROTRY TOP	2.5	DRILLER	127.5	WRKOVR		LAT	42 35 00			
BOT	127.5	DEEP END		ABNDND		LONG	81 33 55			
DRLG FLD		PLUG BK	127.0							

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS	$10^3 m^3/d$
–			177.8	25.3	83.0	CEM	0	OIL 0.8	m^3/d
–			114.1	14.1	122.5	CEM	0	SIP	kPa
–			60.3	6.9	NA	CEM	0	FORM Lucas	
–								INTRVL 122.0–126.0	m
–									m
–			LOGGING RECORD						m

INITIAL OIL RECORD			INTERVAL	TYPE	COMPANY	PERF ☒	OPEN HOLE ☐
INTERVAL	FLOW	DENSITY	10.0 – 126.0	CRNL	SCH	REMARKS	
–			9.0 – 121.0	CMPL	"		
–			–				
–			–				
–			–				
–			–				

INITIAL WATER RECORD			CORING RECORD			
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	mm
–			–			
–			–			
–			–			
–			–			
–			–			

GEOLOGICAL CONTACTS		TOP	ELEV	THICK
	KB / LAKE LEVEL	0.0		
	DRIFT / LAKE BOTTOM	2.5		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON			
	MARCELLUS			
	DUNDEE	80.0		
	COLUMBUS			
	LUCAS	122.0		
	AMHERSTBURG			
	SYLVANIA			
	BOIS BLANC			
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS			
	G SHALE			
	F SHALE			
	F SALT			
	E CARBONATE			
	D SALT/EQUIVALENT			
	C SHALE			
	B MARKER			
	B EQUIVALENT			
	B SALT			
	B ANHYDRITE			
	A2 CARBONATE			
	A2 SALT			
SILURIAN	A2 ANHYDRITE			
	A1 CARBONATE			
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH			
	ERAMOSA			
	GOAT ISLAND			
	GASPORT/WIARTON			
	DECEW			
	ROCHESTER			
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL			
	THOROLD			
	GRIMSBY			
	CABOT HEAD			
	MANITOULIN			
ORDOVICIAN	WHIRLPOOL			
	QUEENSTON			
	BLUE MOUNTAIN - GEORG BAY			
	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
CAMBRIAN				
PRECAMBRIAN				

GEOLOGY BY: Operator

CTY	Elgin	TWP	Aldborough	BLK		TRAC	3-5	LOT	16	CON	XII
WELL NAME	Chatham Eagle 1 Aldborough 3-5-16-XII					PERMIT	7213	INIT CLASS		BD	
OPERATOR	Chatham Resources					TARGET	DEV	CUR STATUS		BD-ABD	

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	Eagle Drilling Services			PERMIT	1987-12-23	NORTH	449.6	m	TOP	RE-ENTRY
RIG TYPE	Rotary	DEPTHS		SPUD	1988-01-23	SOUTH		m	BOT	NO
CABLE TOP		KB ELEV	203.4	COMPTD	1988-01-24	EAST		m	TRAY	SAMPLES
BOT		LOGGER		OFFCNF	1988-02-23	WEST	231.4	m		
ROTRY TOP	1.0	DRILLER	176.8	WRKOVR		LAT	42 33 42			
BOT	176.8	DEEP END		ABNDND	1988-12-05	LONG	81 34 46			
DRLG FLD		PLUG BK								

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS	$10^3 m^3/d$
–			178	NA	80.8	CEM	0	OIL	m^3/d
–			114	NA	146.3	CEM	0	SIP	kPa
–								FORM	
–								INTRVL	m
–									m
–			LOGGING RECORD						m

INITIAL OIL RECORD			INTERVAL	TYPE	COMPANY	PERF ☐	OPEN HOLE ☐
INTERVAL	FLOW	DENSITY	–			REMARKS	
–			–			Re-entry of Cons/Oec	
–			–			33833, Permit 6564	
–			–				
–			–				
–			–				

INITIAL WATER RECORD			CORING RECORD			
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	mm
–			–			
–			–			
–			–			
–			–			
–			–			

GEOLOGICAL CONTACTS		TOP	ELEV	THICK
	KB / LAKE LEVEL	0.0		
	DRIFT / LAKE BOTTOM	1.0		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON	76.3		
	MARCELLUS			
	DUNDEE	91.2		
	COLUMBUS	139.6		
	LUCAS	143.2		
	AMHERSTBURG			
	SYLVANIA			
	BOIS BLANC			
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS			
	G SHALE			
	F SHALE			
	F SALT			
	E CARBONATE			
	D SALT/EQUIVALENT			
	C SHALE			
	B MARKER			
	B EQUIVALENT			
	B SALT			
	B ANHYDRITE			
	A2 CARBONATE			
	A2 SALT			
SILURIAN	A2 ANHYDRITE			
	A1 CARBONATE			
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH			
	ERAMOSA			
	GOAT ISLAND			
	GASPORT/WIARTON			
	DECEW			
	ROCHESTER			
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL			
	THOROLD			
	GRIMSBY			
	CABOT HEAD			
	MANITOULIN			
ORDOVICIAN	WHIRLPOOL			
	QUEENSTON			
	BLUE MOUNTAIN - GEORG BAY			
	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
CAMBRIAN				
PRECAMBRIAN				

GEOLOGY BY:

CTY Elgin TWP Aldborough BLK TRAC 4-8 LOT 16 CON XII

WELL NAME Chatham Eagle 3 Aldborough 4-8-16-XII PERMIT 7218 INIT CLASS DEV

OPERATOR Chatham Resources Ltd TARGET DEV CUR STATUS OSGS-ABD

DRILLING DATA

CONTRACTOR Eagle Drilling Services
RIG TYPE Rotary DEPTHS
CABLE TOP 90.5 KB ELEV 204.8
BOT 94.2 LOGGER
ROTRY TOP 1.0 DRILLER 94.2
BOT 90.5 DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-01-04
SPUD 1988-01-11
COMPTD 1988-09-09
OFFCNF 1988-10-09
WRKOVR
ABNDND 1988-11-30

COORDINATES

NORTH 73.9 m
SOUTH m
EAST m
WEST 77.0 m
LAT 42 33 36
LONG 81 34 31

SAMPLES

TOP 91.1
BOT 94.1
TRAY 7941

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
93.3 – 94.2	SHOW	NA
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
140	NA	90.5	CEM	0

COMPLETION DATA

GAS $10^3m^3/d$
OIL m^3/d
SIP kPa
FORM
INTRVL m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
93.3 – 94.2	SHOW	NA
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
–		
–		
–		
–		
–		
–		

PERF ☐ OPEN HOLE ☐

REMARKS

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
93.3 – 94.2	NA	FRE
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / LAKE LEVEL	0.0		
DRIFT / LAKE BOTTOM	1.0		
DEVONIAN: PORT LAMBTON			
KETTLE POINT			
HAMILTON	80.7		
MARCELLUS			
DUNDEE	93.3		
COLUMBUS			
LUCAS			
AMHERSTBURG			
SYLVANIA			
BOIS BLANC			
SPRINGVALE			
ORISKANY			
SILURIAN: BASS ISLANDS			
G SHALE			
F SHALE			
F SALT			
E CARBONATE			
D SALT/EQUIVALENT			
C SHALE			
B MARKER			
B EQUIVALENT			
B SALT			
B ANHYDRITE			
A2 CARBONATE			
A2 SALT			
SILURIAN: A2 ANHYDRITE			
A1 CARBONATE			
A1 SALT			
A1 ANHYDRITE			
GUELPH			
ERAMOSA			
GOAT ISLAND			
GASPORT/WARTON			
DECEW			
ROCHESTER			
IRONDEQUOIT			
REYNALES/FOSSIL HILL			
THOROLD			
GRIMSBY			
CABOT HEAD			
MANITOULIN			
WHIRLPOOL			
ORDOVICIAN: QUEENSTON			
BLUE MOUNTAIN - GEORG. BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: Operator

CTY Elgin TWP Aldborough BLK TRAC 3-8 LOT 16 CON XII

WELL NAME Chatham Eagle 2 Aldborough 3-8-16-XII PERMIT 7211 INIT CLASS DEV

OPERATOR Chatham Resources Ltd TARGET DEV CUR STATUS OS-ABD *

DRILLING DATA

CONTRACTOR Eagle Drilling Services
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 204.6
BOT LOGGER
ROTRY TOP 1.0 DRILLER 107.0
BOT 107.0 DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1987-12-23
SPUD 1988-01-20
COMPTD 1988-01-22
OFFCNF 1988-02-21
WRKOVR
ABNDND 1988-11-30

COORDINATES

NORTH 77.9 m
SOUTH m
EAST m
WEST 212.7 m
LAT 42 33 33
LONG 81 34 34

SAMPLES

TOP
BOT
TRAY

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
178	NA	88.1	CEM	0

COMPLETION DATA

GAS $10^3m^3/d$
OIL m^3/d
SIP kPa
FORM
INTRVL m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
105.5 – 107.3	Show	NA
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
–		
–		
–		
–		
–		
–		

PERF ☐ OPEN HOLE ☐

REMARKS

* Re-entry of COWS/OEC 33836, Permit 6523, originally reported as OP. No production resulting from drilling under Permit 7211.

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
105.5 – 107.3	NA	SUL
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / LAKE LEVEL	0.0		
DRIFT / LAKE BOTTOM	1.5		
DEVONIAN: PORT LAMBTON			
KETTLE POINT			
HAMILTON			
MARCELLUS			
DUNDEE	92.5		
COLUMBUS			
LUCAS	143.7		
AMHERSTBURG			
SYLVANIA			
BOIS BLANC			
SPRINGVALE			
ORISKANY			
SILURIAN: BASS ISLANDS			
G SHALE			
F SHALE			
F SALT			
E CARBONATE			
D SALT/EQUIVALENT			
C SHALE			
B MARKER			
B EQUIVALENT			
B SALT			
B ANHYDRITE			
A2 CARBONATE			
A2 SALT			
SILURIAN: A2 ANHYDRITE			
A1 CARBONATE			
A1 SALT			
A1 ANHYDRITE			
GUELPH			
ERAMOSA			
GOAT ISLAND			
GASPORT/WARTON			
DECEW			
ROCHESTER			
IRONDEQUOIT			
REYNALES/FOSSIL HILL			
THOROLD			
GRIMSBY			
CABOT HEAD			
MANITOULIN			
WHIRLPOOL			
ORDOVICIAN: QUEENSTON			
BLUE MOUNTAIN - GEORG. BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY:

T.R. Carter

CTY Elgin TWP Aldborough BLK TRAC 3-5 LOT 17 CON XII
WELL NAME Chatham Eagle 11 Aldborough 3-5-17-XII PERMIT 7411 INIT CLASS DEV
OPERATOR Chatham Resources Ltd TARGET DEV CUR STATUS OS-ABD

DRILLING DATA				DATES		COORDINATES		SAMPLES	
CONTRACTOR	Eagle Drilling Services			PERMIT	1988-10-19	NORTH 485.8	m	TOP	Re-entry
RIG TYPE	Rotary	DEPTHS		SPUD	1988-10-21	SOUTH	m	BOT	no
CABLE TOP	143.0	KB ELEV	206.7	COMPTD	1988-11-18	EAST	m	TRAY	samples
BOT	146.6	LOGGER		OFFCNF	1988-12-18	WEST 226.3	m		
ROTARY TOP	1.0	DRILLER	146.6	WRKOVR		LAT 42 33 57			
BOT	143.0	DEEP END		ABNOND	1988-11-30	LONG 81 34 29			
DRLG FLD		PLUG BK							

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS	$10^3 m^3/d$
–			178	NA	84.9	CEM	0	OIL	m^3/d
–								SIP	kPa
–								FORM	
–								INTRVL	m
–									m
–			LOGGING RECORD						m

INITIAL OIL RECORD			LOGGING RECORD			PERF ☐ OPEN HOLE ☐
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	REMARKS
102.8 – 103.0	Show	NA	–			Re-entry of Cons/OEC
111.5 – 112.5	Show	NA	–			33828, Permit 6663
–			–			
–			–			
–			–			

INITIAL WATER RECORD			CORING RECORD			
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	mm
111.5 – 112.5	NA	–	–			
146.6 –	NA	SUL	–			
–			–			
–			–			
–			–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / LAKE LEVEL	0.0		
	DRIFT / LAKE BOTTOM	1.0		
DEVONIAN	PORT LAMBTON			
DEVONIAN	KETTLE POINT			
DEVONIAN	HAMILTON	78.1		
DEVONIAN	MARCELLUS			
DEVONIAN	DUNDEE	95.5		
DEVONIAN	COLUMBUS	143.4		
DEVONIAN	LUCAS	148.2		
DEVONIAN	AMHERSTBURG			
DEVONIAN	SYLVANIA			
DEVONIAN	BOIS BLANC			
DEVONIAN	SPRINGVALE			
DEVONIAN	ORISKANY			
SILURIAN	BASS ISLANDS			
SILURIAN	G SHALE			
SILURIAN	F SHALE			
SILURIAN	F SALT			
SILURIAN	E CARBONATE			
SILURIAN	D SALT/EQUIVALENT			
SILURIAN	C SHALE			
SILURIAN	B MARKER			
SILURIAN	B EQUIVALENT			
SILURIAN	B SALT			
SILURIAN	B ANHYDRITE			
SILURIAN	A2 CARBONATE			
SILURIAN	A2 SALT			

SILURIAN	A2 ANHYDRITE		
SILURIAN	A1 CARBONATE		
SILURIAN	A1 SALT		
SILURIAN	A1 ANHYDRITE		
SILURIAN	GUELPH		
SILURIAN	ERAMOSA		
SILURIAN	GOAT ISLAND		
SILURIAN	GASPORT/WIARTON		
SILURIAN	DECEW		
SILURIAN	ROCHESTER		
SILURIAN	IRONDEQUOIT		
SILURIAN	REYNALES/FOSSIL HILL		
SILURIAN	THOROLD		
SILURIAN	GRIMSBY		
SILURIAN	CABOT HEAD		
SILURIAN	MANITOULIN		
SILURIAN	WHIRLPOOL		
ORDOVICIAN	QUEENSTON		
ORDOVICIAN	BLUE MOUNTAIN - GEORG BAY		
ORDOVICIAN	COLLINGWOOD		
ORDOVICIAN	COBOURG		
ORDOVICIAN	VERULAM		
ORDOVICIAN	KIRKFIELD		
ORDOVICIAN	COBOCONK		
ORDOVICIAN	GULL RIVER		
ORDOVICIAN	SHADOW LAKE		
CAMBRIAN	CAMBRIAN		
PRECAMBRIAN	PRECAMBRIAN		

GEOLOGY BY:

CTY Elgin TWP Aldborough BLK TRAC 3-7 LOT 17 CON XII
WELL NAME Chatham Eagle 4 Aldborough 3-7-17-XII PERMIT 7212 INIT CLASS DEV
OPERATOR Chatham Resources Ltd TARGET DEV CUR STATUS OS-ABD

DRILLING DATA				DATES		COORDINATES		SAMPLES	
CONTRACTOR	Eagle Drilling Services			PERMIT	1987-12-23	NORTH 97.2	m	TOP	111.3
RIG TYPE	Rotary	DEPTHS		SPUD	1988-01-19	SOUTH	m	BOT	146.9
CABLE TOP	96.0	KB ELEV	207.4	COMPTD	1988-01-19	EAST 75.4	m	TRAY	112
BOT	146.9	LOGGER		OFFCNF	1988-02-18	WEST	m		
ROTARY TOP	1.0	DRILLER	96.0	WRKOVR		LAT 42 33 40			
BOT	96.0	DEEP END	146.9	ABNOND	1988-12-06	LONG 81-34-26			
DRLG FLD		PLUG BK							

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS	$10^3 m^3/d$
–			178	NA	94.2	CEM	0	OIL	m^3/d
–								SIP	kPa
–								FORM	
–								INTRVL	m
–									m
–			LOGGING RECORD						m

INITIAL OIL RECORD			LOGGING RECORD			PERF ☐ OPEN HOLE ☐
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	REMARKS
95.7 – 96.0	4.8	NA	–			Re-entry of Cons/OEC
–			–			33834, Permit 6566
–			–			
–			–			Chatham Eng. Ltd.
–			–			drilled from
			–			96.0 to 146.9

INITIAL WATER RECORD			CORING RECORD			
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	mm
95.7 – 96.0	NA	–	–			
138.1 –	18.3	SAL	–			
–			–			
–			–			
–			–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / LAKE LEVEL	0.0		
	DRIFT / LAKE BOTTOM	1.0		
DEVONIAN	PORT LAMBTON			
DEVONIAN	KETTLE POINT			
DEVONIAN	HAMILTON	79.0		
DEVONIAN	MARCELLUS			
DEVONIAN	DUNDEE	94.0		
DEVONIAN	COLUMBUS			
DEVONIAN	LUCAS	144.0		
DEVONIAN	AMHERSTBURG			
DEVONIAN	SYLVANIA			
DEVONIAN	BOIS BLANC			
DEVONIAN	SPRINGVALE			
DEVONIAN	ORISKANY			
SILURIAN	BASS ISLANDS			
SILURIAN	G SHALE			
SILURIAN	F SHALE			
SILURIAN	F SALT			
SILURIAN	E CARBONATE			
SILURIAN	D SALT/EQUIVALENT			
SILURIAN	C SHALE			
SILURIAN	B MARKER			
SILURIAN	B EQUIVALENT			
SILURIAN	B SALT			
SILURIAN	B ANHYDRITE			
SILURIAN	A2 CARBONATE			
SILURIAN	A2 SALT			

SILURIAN	A2 ANHYDRITE		
SILURIAN	A1 CARBONATE		
SILURIAN	A1 SALT		
SILURIAN	A1 ANHYDRITE		
SILURIAN	GUELPH		
SILURIAN	ERAMOSA		
SILURIAN	GOAT ISLAND		
SILURIAN	GASPORT/WIARTON		
SILURIAN	DECEW		
SILURIAN	ROCHESTER		
SILURIAN	IRONDEQUOIT		
SILURIAN	REYNALES/FOSSIL HILL		
SILURIAN	THOROLD		
SILURIAN	GRIMSBY		
SILURIAN	CABOT HEAD		
SILURIAN	MANITOULIN		
SILURIAN	WHIRLPOOL		
ORDOVICIAN	QUEENSTON		
ORDOVICIAN	BLUE MOUNTAIN - GEORG BAY		
ORDOVICIAN	COLLINGWOOD		
ORDOVICIAN	COBOURG		
ORDOVICIAN	VERULAM		
ORDOVICIAN	KIRKFIELD		
ORDOVICIAN	COBOCONK		
ORDOVICIAN	GULL RIVER		
ORDOVICIAN	SHADOW LAKE		
CAMBRIAN	CAMBRIAN		
PRECAMBRIAN	PRECAMBRIAN		

GEOLOGY BY: T.R. Carter

CTY Elgin TWP Aldborough BLK TRAC 4-7 LOT 17 CON XII
WELL NAME Chatham Eagle 10 Aldborough 4-7-17-XII PERMIT 7406 INIT CLASS DEV
OPERATOR Chatham Resources Ltd TARGET DEV CUR STATUS DH-ABD

DRILLING DATA

CONTRACTOR Eagle Drilling Services
RIG TYPE Rotary DEPTHS
CABLE TOP 92.4 KB ELEV 206.4
BOT 111.0 LOGGER
ROTRY TOP NA DRILLER 111.0
BOT 92.4 DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-09-23
SPUD 1988-09-29
COMPTD 1988-10-11
OFFCNF 1988-11-10
WRKOVR
ABNDND 1988-11-30

COORDINATES

NORTH 121.9 m
SOUTH m
EAST 238.5 m
WEST m
LAT 42 33 44
LONG 81 34 21

SAMPLES

TOP 93.6
BOT 110.9
TRAY 7871

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
178	NA	92.4	CEM	0

COMPLETION DATA

GAS $10^3 m^3/d$
OIL m^3/d
SIP kPa
FORM
INTRVL m
m
m
PERF ☐ OPEN HOLE ☐

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
–		
–		
–		
–		
–		
–		

REMARKS

Chatham Eng. drilled from 92.4 to 111.0

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
110.5 –	12.2	SUL
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS

		TOP	ELEV	THICK
	KB /EAKELEVEL	0.0		
	DRIFT /OVERBURDEN	1.0		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON	73.8		
	MARCELLUS			
	DUNDEE	92.4		
	COLUMBUS			
	LUCAS			
	AMHERSTBURG			
	SYLVANIA			
	BOIS BLANC			
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS			
	G SHALE			
	F SHALE			
	F SALT			
	E CARBONATE			
	D SALT/EQUIVALENT			
	C SHALE			
	B MARKER			
	B EQUIVALENT			
	B SALT			
	B ANHYDRITE			
	A2 CARBONATE			
	A2 SALT			

SILURIAN	A2 ANHYDRITE			
	A1 CARBONATE			
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH			
	ERAMOSA			
	GOAT ISLAND			
	GASPORT/MARITON			
	DECEW			
	ROCHESTER			
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL			
	THOROLD			
	GRIMSBY			
	CABOT HEAD			
	MANITOULIN			
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON			
	BLUE MOUNTAIN - GEORG BAY			
	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
CAMBRIAN				
PRECAMBRIAN				

GEOLOGY BY: T.R. Carter

CTY Elgin TWP Aldborough BLK TRAC 2-7 LOT 17 CON XII
WELL NAME Chatham Eagle 5 Aldborough 2-7-17-XII PERMIT 7219 INIT CLASS DEV
OPERATOR Chatham Resources Ltd TARGET DEV CUR STATUS OSCS-ABD

DRILLING DATA

CONTRACTOR Eagle Drilling Services
RIG TYPE Rotary DEPTHS
CABLE TOP 92.0 KB ELEV 205.3
BOT 130.5 LOGGER
ROTRY TOP 1.0 DRILLER 130.5
BOT 92.0 DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-01-04
SPUD 1988-01-15
COMPTD 1988-09-29
OFFCNF 1988-10-29
WRKOVR
ABNDND 1988-11-30

COORDINATES

NORTH 252.7 m
SOUTH m
EAST 77.0 m
WEST m
LAT 42 33 44.5
LONG 81 34 31

SAMPLES

TOP 90.5
BOT 130.5
TRAY 6822

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
107.9 –	Show	NA
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
140	NA	92.0	CEM	0

COMPLETION DATA

GAS $10^3 m^3/d$
OIL m^3/d
SIP kPa
FORM
INTRVL m
m
m
PERF ☐ OPEN HOLE ☐

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
95.4 – 95.7	Show	NA
107.9 –	Show	NA
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
–		
–		
–		
–		
–		
–		

REMARKS

Chatham Eng. Ltd. drilled from 92.0 to 130.5 1988-09-01 to 09-29

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
107.9 –	NA	NA
116.4 –	NA	NA
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS

		TOP	ELEV	THICK
	KB /OAKELEVEL	0.0		
	DRIFT /OVERBURDEN	1.0		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON	72.8		
	MARCELLUS			
	DUNDEE	92.4		
	COLUMBUS			
	LUCAS			
	AMHERSTBURG			
	SYLVANIA			
	BOIS BLANC			
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS			
	G SHALE			
	F SHALE			
	F SALT			
	E CARBONATE			
	D SALT/EQUIVALENT			
	C SHALE			
	B MARKER			
	B EQUIVALENT			
	B SALT			
	B ANHYDRITE			
	A2 CARBONATE			
	A2 SALT			

SILURIAN	A2 ANHYDRITE			
	A1 CARBONATE			
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH			
	ERAMOSA			
	GOAT ISLAND			
	GASPOR/MARITON			
	DECEW			
	ROCHESTER			
	IRONDEQUOIT			
	REYNALE/FOSSIL HILL			
	THOROLD			
	GRIMSBY			
	CABOT HEAD			
	MANITOULIN			
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON			
	BLUE MOUNTAIN - GEORG BAY			
	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
CAMBRIAN				
PRECAMBRIAN				

GEOLOGY BY: T.R. Carter

T.R. Carter

CTY Elgin TWP Dunwich BLK TRAC B LOT 22 CON BF-A
WELL NAME Judo Dunwich B-22-BF-A PERMIT 7246 INIT CLASS NPW
OPERATOR Forbes Resources Ltd TARGET CAM CUR STATUS OP-CS

DRILLING DATA		DATES		COORDINATES		SAMPLES	
CONTRACTOR	Jones Newport Drilling Services	PERMIT	1988-02-29	NORTH 107.0	m	TOP	52.0
RIG TYPE	Cable	SPUD	1988-03-10	SOUTH	m	BOT	1074.0
CABLE TOP	1.2	COMPTD	1988-04-28	EAST	m	TRAY	9232-
BOT	1084.0	OFFCNF	1989-04-28	WEST 107.0	m		33
ROTRY TOP		WRKOVR		LAT 42 45 32			
BOT		ABNDND		LONG 81 31 30			
DRLG FLD							

DEPTHS: KB ELEV 200.2; LOGGER 1084.0; DRILLER 1084.0; DEEP END; PLUG BK

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
362.0 –	NA	NA
1074.0 –	NA	9308
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
219	35.7	52.4	SHO	0
178	29.8	326.2	CEM	0
114	14.9	1083.9	CEM	0

COMPLETION DATA

GAS NA 10 ^{3}m^3/d
OIL NA m^3/d
SIP 9308 kPa
FORM Cambrian
INTRVL 1074.0-1080.0 m
m
m

LOGGING RECORD

INTERVAL	TYPE	COMPANY
993.5 – 1082.0	GRNL	CMPL
1000.0 – 1084.0	DENL	"
–		
–		
–		
–		

PERF ☒ OPEN HOLE ☐

REMARKS: A-2 Shale at 370.5

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
1074.0 –	SHOW	NA
–		
–		
–		
–		

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
32.0 –	NA	FRZ
130.0 –	NA	SUL
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			

GEOLOGICAL CONTACTS		TOP	ELEV	THICK
	KB / KELLY LEVEL	0.0		
	DRIFT / BEDROCK	1.2		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON	50.0		
	MARCELLUS			
	DUNDEE	65.0		
	COLUMBUS			
	LUCAS	91.2		
	AMHERSTBURG	134.5		
	SYLVANIA			
	BOIS BLANC	197.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	228.0		
	G SHALE	252.3		
	F SHALE	260.5		
	F SALT			
	E CARBONATE	297.2		
	D SALT/EQUIVALENT			
	C SHALE	318.6		
	B MARKER	328.5		
	B EQUIVALENT	336.0		
	B SALT			
	B ANHYDRITE			
	A2 CARBONATE	349.8		
	A2 SALT			
	A2 ANHYDRITE	376.0		
	A1 CARBONATE	377.4		
	A1 SALT			
	A1 ANHYDRITE			
SILURIAN	GUELPH	396.0		
	ERAMOSA			
	GOAT ISLAND	414.0		
	GASPORT/MARTON	447.0		
	DECEW			
	ROCHESTER	457.5		
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL	472.5		
	THOROLD			
	GRIMSBY			
	CABOT HEAD	480.0		
	MANITOULIN	499.0		
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON	510.0		
	BLUE MOUNTAIN - GEORG BAY	654.0		
	COLLINGWOOD			
	COBOURG	812.7		
	VERULAM			
	KIRKFIELD			
	COBOCONK	960.0		
	GULL RIVER			
	SHADOW LAKE	1070.0		
	CAMBRIAN	1074.5		
	PRECAMBRIAN	1077.0		

GEOLOGY BY: T.R. Carter

CTY Elgin TWP Lake Erie BLK 54 TRAC K LOT CON
WELL NAME Consumers 13915 Lake Erie 54-K PERMIT 7265 INIT CLASS NPW
OPERATOR The Consumers Gas Co. Ltd TARGET CLI CUR STATUS GS-ABD

DRILLING DATA		DATES		COORDINATES		SAMPLES	
CONTRACTOR	Underwater Gas Developers Ltd	PERMIT	1988-05-03	NORTH	m	TOP	75.0
RIG TYPE	Rotary	SPUD	1988-06-08	SOUTH	m	BOT	467.0
CABLE TOP		COMPTD	1988-06-13	EAST	m	TRAY	6724
BOT		OFFCNF	1989-06-13	WEST	m		
ROTRY TOP	20.6	WRKOVR		LAT 42 37 17.2			
BOT	467.0	ABNDND	1988-06-14	LONG 81 00 19.6			
DRLG FLD							

DEPTHS: KB ELEV 181.2; LOGGER 466.9; DRILLER 467.0; DEEP END; PLUG BK

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
318.0 – 345.0	.4	4199
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
273	75.9	20.6	HAN	20.6
244	54.0	76.2	CEM	0
178	23.0	187.9	CEM	0

COMPLETION DATA

GAS 10 ^{3}m^3/d
OIL m^3/d
SIP kPa
FORM
INTRVL m
m
m

LOGGING RECORD

INTERVAL	TYPE	COMPANY
30.0 – 466.1	GRNL	SCH
188.0 – 466.1	DENL	"
–		
–		
–		
–		

PERF ☐ OPEN HOLE ☐

REMARKS: DST #1 – 318.0-345.0
A-2 Shale at 321.3

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			

GEOLOGICAL CONTACTS		TOP	ELEV	THICK
	KB / LAKE LEVEL	6.5		
	BRICK / LAKE BOTTOM	20.6		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON			
	MARCELLUS			
	DUNDEE	75.0		
	COLUMBUS			
	LUCAS	87.0		
	AMHERSTBURG	114.0		
	SYLVANIA			
	BOIS BLANC	136.0		
	SPRINGVALE			
	ORISKANY	180.0		
SILURIAN	BASS ISLANDS	181.3		
	G SHALE	207.9		
	F SHALE	216.7		
	F SALT			
	E CARBONATE	256.9		
	D SALT/EQUIVALENT			
	C SHALE	281.2		
	B MARKER	296.0		
	B EQUIVALENT			
	B SALT			
	B ANHYDRITE	304.2		
	A2 CARBONATE	313.0		
	A2 SALT			
	A2 ANHYDRITE	323.4		
	A1 CARBONATE	325.7		
	A1 SALT			
	A1 ANHYDRITE			
SILURIAN	GUELPH	336.5		
	ERAMOSA			
	GOAT ISLAND			
	GASPORT/MARTON			
	DECEW			
	ROCHESTER	409.0		
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL	427.0		
	THOROLD			
	GRIMSBY			
	CABOT HEAD	432.4		
	MANITOULIN	454.0		
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON	465.0		
	BLUE MOUNTAIN - GEORG BAY			
	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
	CAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Elgin TWP Lake Erie BLK 119 TRAC P LOT CON

WELL NAME Consumers 13917 Lake ERie 119-P PERMIT 7267 INIT CLASS DEV

OPERATOR The Consumers Gas Co. Ltd TARGET SAL CUR STATUS GP-SUS

DRILLING DATA

CONTRACTOR Underwater Gas Developers Ltd
RIG TYPE Rotary
CABLE TOP
BOT
ROTRY TOP 27.3
BOT 400.0
DRLG FLD

DEPTHS
KB ELEV 181.2
LOGGER 399.5
DRILLER 400.0
DEEP END
PLUG BK

DATES

PERMIT 1988-05-03
SPUD 1988-06-03
COMPTD 1988-06-06
OFFCNF 1988-07-06
WRNOVR
ABNDND

COORDINATES

NORTH m
SOUTH m
EAST m
WEST m
LAT 42 26 05.7
LONG 80 59 39.7

SAMPLES

TOP 102.0
BOT 400.0
TRAV 6673

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
377.0 – 400.0	31.8	4910
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
273	75.9	27.3	HAN	27.3
244	54.0	103.4	CEM	0
178	25.0	213.3	CEM	0
114	14.4	385.3	CEM	0
60	7.0	397.5	HAN	0

COMPLETION DATA

GAS 31.8 10³m³/d
OIL m³/d
SIP 4910 kPa
FORM Guelph
INTRVL NA m
m
m
PERF ☐ OPEN HOLE ☐

REMARKS

DST #1 - 377.0-400.0

A-2 Shale at 384.0

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
27.0 – 398.8	GR/L	SCH
213.0 – 398.8	P.N.	"
–		
–		
–		
–		

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS

		TOP	ELEV	THICK
	KB / LAKE LEVEL	6.5		
	DRIFT / LAKE BOTTOM	27.3		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON	102.0		
	MARCELLUS			
	DUNDEE	150.9		
	COLUMBUS			
	LUCAS	171.0		
	AMHERSTBURG	185.5		
	SYLVANIA			
	BOIS BLANC	206.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	227.0		
	G SHALE	265.5		
	F SHALE	270.5		
	F SALT			
	E CARBONATE	309.0		
	D SALT/EQUIVALENT			
	C SHALE	333.0		
	B MARKER	353.7		
	B EQUIVALENT			
	B SALT			
	B ANHYDRITE	369.0		
	A2 CARBONATE	373.4		
	A2 SALT			
	A2 ANHYDRITE	385.0		
	A1 CARBONATE	389.0		
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH			
	SRAMOSA			
	GOAT ISLAND			
	GASPORT/WARTON			
	DECEW			
	ROCHESTER			
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL			
	THOROLD			
	GRIMSBY			
	CABOT HEAD			
	MANITOULIN			
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON			
	BLUE MOUNTAIN - GEORG BAY			
	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
CAMBRIAN				
PRECAMBRIAN				

GEOLOGY BY: T.R. Carter

CTY Elgin TWP Lake Erie BLK 119 TRAC Y LOT CON

WELL NAME Consumers 13918 Lake Erie 119-Y PERMIT 7268 INIT CLASS DEV

OPERATOR The Consumers Gas Co. Ltd TARGET SAL CUR STATUS GP

DRILLING DATA

CONTRACTOR Underwater Gas Developers Ltd
RIG TYPE Rotary
CABLE TOP
BOT
ROTRY TOP 27.5
BOT 399.0
DRLG FLD

DEPTHS
KB ELEV 181.2
LOGGER 398.9
DRILLER 399.0
DEEP END
PLUG BK

DATES

PERMIT 1988-05-03
SPUD 1988-05-30
COMPTD 1988-06-01
OFFCNF 1988-07-01
WRNOVR
ABNDND

COORDINATES

NORTH m
SOUTH m
EAST m
WEST m
LAT 42 25 21.7
LONG 80 59 12.8

SAMPLES

TOP 111.0
BOT 399.0
TRAV 6649

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
372.0 – 399.0	12.7	4808
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
273	75.9	27.5	HAN	27.5
244	53.6	111.3	CEM	0
178	29.8	282.1	CEM	0
114	14.4	386.1	CEM	0
60	7.0	396.1	HAN	0

COMPLETION DATA

GAS 12.7 10³m³/d
OIL m³/d
SIP 4808 kPa
FORM A-2, A-1, Guelph
INTRVL 372.0-399.0 m
m
m
PERF ☐ OPEN HOLE ☐

REMARKS

DST #1-372.0-399.0

A-2 Shale at 380.5

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
27.5 – 398.0	GR/L	SCH
257.0 – 398.0	DEN/L	"
–		
–		
–		
–		
–		

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS

		TOP	ELEV	THICK
	KB / LAKE LEVEL	6.5		
	DRIFT / LAKE BOTTOM	27.5		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON	111.0		
	MARCELLUS			
	DUNDEE	153.0		
	COLUMBUS			
	LUCAS	180.0		
	AMHERSTBURG	191.0		
	SYLVANIA			
	BOIS BLANC	211.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	225.5		
	G SHALE	264.0		
	F SHALE	270.6		
	F SALT			
	E CARBONATE	309.0		
	D SALT/EQUIVALENT			
	C SHALE	331.8		
	B MARKER	351.5		
	B EQUIVALENT			
	B SALT			
	B ANHYDRITE	364.3		
	A2 CARBONATE	374.0		
	A2 SALT			
	A2 ANHYDRITE	381.5		
	A1 CARBONATE	382.8		
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH	397.0		
	SRAMOSA			
	GOAT ISLAND			
	GASPORT/WARTON			
	DECEW			
	ROCHESTER			
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL			
	THOROLD			
	GRIMSBY			
	CABOT HEAD			
	MANITOULIN			
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON			
	BLUE MOUNTAIN - GEORG BAY			
	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
CAMBRIAN				
PRECAMBRIAN				

GEOLOGY BY: T.R. Carter

T.R. Carter

CTY Elgin TWP Lake Erie BLK 158 TRAC 1 LOT CON

WELL NAME Consumers 13919 Lake Erie 158-1 PERMIT 7269 INIT CLASS DEV

OPERATOR The Consumers Gas Co. Ltd TARGET SAL CUR STATUS GP

DRILLING DATA				DATES		COORDINATES		SAMPLES	
CONTRACTOR	Underwater Gas Developers Ltd			PERMIT	1988-05-03	NORTH	m	TOP	114.0
RIG TYPE	Rotary	DEPTHS		SPUD	1988-05-24	SOUTH	m	BOT	398.0
CABLE TOP		KB ELEV	181.2	COMPTD	1988-05-27	EAST	m	TRAY	6787
BOT		LOGGER	397.7	OFFCNF	1988-06-26	WEST	m		
ROTARY TOP	34.1	DRILLER	398.0	WRKOVR		LAT	42 23 22.1		
BOT	398.0	DEEP END		ABNDND		LONG	80 56 06.3		
DRLG FLD		PLUG BK							

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS 17.1	10³m³/d
373.0 – 398.0	17.1	4831	273	75.9	34.1	HAN	34.1	OIL	m³/d
–			244	53.6	111.3	CEM	0	SIP 4831	kPa
–			178	29.8	226.3	CEM	0	FORM A-2, A-1, Guelph	
–			114	14.4	379.8	CEM	0	INTRVL 373.0-398.0	m
–			60	7.0	396.6	HAN	0		m
–									m

INITIAL OIL RECORD			LOGGING RECORD			PERF ☐ OPEN HOLE ☐
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	REMARKS
–			28.0 – 396.7	GRNL	SCH	DST #1 - 373.0-391.0
–			226.0 – 396.7	DENL	"	DST #2 - 373.0-398.0
–			–			
–			–			
–			–			A-2 Shale at 377.8
–			–			

INITIAL WATER RECORD			CORING RECORD			
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	mm
–			–			
–			–			
–			–			
–			–			
–			–			

GEOLOGICAL CONTACTS		TOP	ELEV	THICK
	KB / LAKE LEVEL	6.5		
	DRIFT / LAKE BOTTOM	34.1		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT	114.0		
	HAMILTON	117.0		
	MARCELLUS			
	DUNDEE	160.0		
	COLUMBUS			
	LUCAS	188.0		
	AMHERSTBURG	203.0		
	SYLVANIA			
	BOIS BLANC	224.0		
	SPRINGVALE			
	ORISKANY	234.0		
SILURIAN	BASS ISLANDS			
	G SHALE	267.3		
	F SHALE	274.2		
	F SALT			
	E CARBONATE	312.9		
	D SALT/EQUIVALENT			
	C SHALE	335.7		
	B MARKER	349.7		
	B EQUIVALENT			
	B SALT			
	B ANHYDRITE	363.9		
	A2 CARBONATE	371.3		
	A2 SALT			

	A2 ANHYDRITE	379.0		
	A1 CARBONATE	380.7		
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH	389.7		
	ERAMOSA			
	GOAT ISLAND			
SILURIAN	GASPORT/WIARTON			
	DECEW			
	ROCHESTER			
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL			
	THOROLD			
	GRIMSBY			
	CABOT HEAD			
	MANITOULIN			
	WHIRLPOOL			
	QUEENSTON			
	BLUE MOUNTAIN - GEORG BAY			
	COLLINGWOOD			
	COBOURG			
ORDOVICIAN	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
	CAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY:

CTY Elgin TWP Southwold BLK TRAC 8 LOT 27 CON STRNB

WELL NAME North Hawk Southwold 8-27-STRNB PERMIT 7323 INIT CLASS NFW

OPERATOR North Hawk Resources Ltd TARGET CAM CUR STATUS GS-ABD

DRILLING DATA				DATES		COORDINATES		SAMPLES	
CONTRACTOR	Rawlings Drilling Co. Ltd			PERMIT	1988-06-07	NORTH	129.3 m	TOP	92.5
RIG TYPE	Cable	DEPTHS		SPUD	1988-06-30	SOUTH	m	BOT	1083.6
CABLE TOP	0.9	KB ELEV	226.8	COMPTD	1988-10-13	EAST	107.0 m	TRAY	9260-
BOT	1083.6	LOGGER	1081.7	OFFCNF	1989-10-13	WEST	m		61
ROTARY TOP		DRILLER	1083.6	WRKOVR		LAT	42 45 43		
BOT		DEEP END		ABNDND	1990-12-12	LONG	81 17 43		
DRLG FLD		PLUG BK	1077.2						

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS 17.0	10³m³/d
950.7 – 956.0	Show	NA	339.7	81.1	92.4	SMO	0	OIL NA	m³/d
1074.7 – 1076.6	Show	NA	219.1	35.7	271.0	BHP	260.0	SIP 7239.5	kPa
–			177.8	29.8	494.1	BHP	497.7	FORM Cambrian	
–			139.7	20.8	1072.9	CEM	490.7	INTRVL 1074.7-1077.8	m
–			76.2	NA	1080.2	CEM	0		m
–									m

INITIAL OIL RECORD			LOGGING RECORD			PERF ☑ OPEN HOLE ☐
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	REMARKS
1074.7 – 1076.6	Show	NA	0.0 – 1081.7	GRNL	CMPL	
–			12.2 – 1081.7	DENL	"	A-2 Shale at 354.2
–			1048.5 – 1072.9	CMPL	"	
–			–			
–			–			
–			–			

INITIAL WATER RECORD			CORING RECORD			
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	mm
81.7 –	30.5	FRE	–			
93.0 –	27.4	SAL	–			
117.3 –	27.4	SUL	–			
399.9 – 402.3	NA	SAL	–			
1079.3 – 1083.6	243.8	SAL	–			
–			–			

GEOLOGICAL CONTACTS		TOP	ELEV	THICK
	KB / LAKE LEVEL	0.0		
	DRIFT / LAKE BOTTOM	0.9		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON			
	MARCELLUS			
	DUNDEE	91.4		
	COLUMBUS			
	LUCAS	103.0		
	AMHERSTBURG	152.0		
	SYLVANIA			
	BOIS BLANC	197.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	220.8		
	G SHALE	239.6		
	F SHALE	247.2		
	F SALT			
	E CARBONATE	289.3		
	D SALT/EQUIVALENT			
	C SHALE	313.3		
	B MARKER	321.3		
	B EQUIVALENT	327.4		
	B SALT			
	B ANHYDRITE			
	A2 CARBONATE	338.3		
	A2 SALT			

	A2 ANHYDRITE	356.6		
	A1 CARBONATE	359.7		
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH	370.6		
	ERAMOSA			
	GOAT ISLAND	386.5		
SILURIAN	GASPORT/WIARTON	439.8		
	DECEW			
	ROCHESTER	446.5		
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL	464.5		
	THOROLD			
	GRIMSBY			
	CABOT HEAD	467.0		
	MANITOULIN	490.7		
	WHIRLPOOL			
	QUEENSTON	499.0		
	BLUE MOUNTAIN - GEORG BAY	652.0		
	COLLINGWOOD			
	COBOURG	830.9		
ORDOVICIAN	VERULAM	877.2		
	KIRKFIELD	932.7		
	COBOCONK	972.3		
	GULL RIVER	997.3		
	SHADOW LAKE	1076.6		
	CAMBRIAN	1077.2		
	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Essex TWP Anderdon BLK TRAC LOT 34 CON I

WELL NAME Brine Well F-2 Anderdon 34-I PERMIT 7255 INIT CLASS SH

OPERATOR General Chemical Canada Ltd TARGET SAL CUR STATUS SH

DRILLING DATA

CONTRACTOR Eagle Drilling Services
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 178.2
BOT LOGGER 372.8
ROTRY TOP 2.3 DRILLER 372.5
BOT 372.5 DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-03-23
SPUD 1988-10-05
COMPTD 1988-10-15
OFFCNF 1988-11-14
WRKOVR
ABNOND

COORDINATES

NORTH 174.3 m
SOUTH m
EAST m
WEST 624.8 m
LAT 42 10 21
LONG 83 05 26

SAMPLES

TOP 42.6
BOT 372.8
TRAY 9366

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
406	NA	4.6	BAR	0
273	60.3	30.5	CEM	0
177.8	29.8	307.2	CEM	0
139.7	23.1	357.5		0

COMPLETION DATA

GAS $10^3m^3/d$
OIL m^3/d
SIP kPa
FORM
INTRVL m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
351.1 – 356.9	SONR	CMPL
0.0 – 372.5	GRNL	"
0.0 – 372.5	DENL	"
–		
–		
–		

PERF ☐ OPEN HOLE ☐

REMARKS

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	MM
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS

		TOP	ELEV	THICK
	KB FLANGE/DERRICK FLOOR	0.0		
	DRIFT AGE/DEPOSITION	2.3		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON			
	MARCELLUS			
	DUNDEE			
	COLUMBUS			
	LUCAS			
	AMHERSTBURG	17.1		
	SYLVANIA	67.0		
	BOIS BLANC	103.6		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	133.0		
	G SHALE	192.2		
	F SHALE	197.5		
	F SALT			
	E CARBONATE	242.3		
	D SALT/EQUIVALENT			
	C SHALE	274.0		
	B MARKER	294.1		
	B EQUIVALENT	299.9		
	B SALT	306.9		
	B ANHYDRITE			
	A2 CARBONATE			
	A2 SALT			
	A2 ANHYDRITE			
	A1 CARBONATE			
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH			
	ERAMOSA			
	GOAT ISLAND			
	GASPORT/MARTON			
	DECEW			
	ROCHESTER			
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL			
	THOROLD			
	GRIMSBY			
	CABOT HEAD			
	MANITOULIN			
	WHIRLPOOL			
	QUEENSTON			
	BLUE MOUNTAIN - GEORG BAY			
ORDOVICIAN	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
	GAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Essex TWP Colchester North BLK TRAC 8 LOT 1 CON XIII

WELL NAME Consumers 34310 Colchester N. 8-1-XIII PERMIT 7385 INIT CLASS NFW

OPERATOR The Consumers Gas Co. Ltd TARGET ORD CUR STATUS 05-ABD

DRILLING DATA

CONTRACTOR Underwater Gas Developers Ltd
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 188.9
BOT LOGGER 1062.4
ROTRY TOP 4.7 DRILLER 1065.6
BOT 1065.6 DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-08-23
SPUD 1988-08-26
COMPTD 1988-09-05
OFFCNF 1989-09-05
WRKOVR
ABNOND 1988-09-07

COORDINATES

NORTH 165.0 m
SOUTH m
EAST m
WEST 47.0 m
LAT 42 14 58.5
LONG 82 57 42

SAMPLES

TOP 6.0
BOT 1064.0
TRAY 9258-59

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244	54.0	61.4	CEM	0
178	25.0	523.4	CEM	0

COMPLETION DATA

GAS $10^3m^3/d$
OIL m^3/d
SIP kPa
FORM
INTRVL m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
785.0 – 791.0	Show	NA
800.0 –	Show	NA
827.0 –	Show	NA
915.0 –	Show	NA
989.0 –	Show	NA
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
0.0 – 1061.7	GRNL	SCH
0.0 – 1061.7	LDT	"
0.0 – 1061.7	PEF	"
55.0 – 1058.0	SONL	"
522.1 – 1061.4	DLLM	"
751.0 – 1052.0	CBCK	"
–		

PERF ☐ OPEN HOLE ☐

REMARKS

DTS #1 - 825.0-878.0
DST #2 - 777.0-803.0

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
32.0 – 36.0	NA	FRE
105.0 – 107.0	NA	SUL
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	MM
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS

		TOP	ELEV	THICK
	KB FLANGE/DERRICK FLOOR	0.0		
	DRIFT AGE/DEPOSITION	4.7		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON			
	MARCELLUS			
	DUNDEE			
	COLUMBUS			
	LUCAS	33.4		
	AMHERSTBURG	69.0		
	SYLVANIA	102.0		
	BOIS BLANC	129.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	186.0		
	G SHALE	234.9		
	F SHALE	240.6		
	F SALT			
	E CARBONATE	284.8		
	D SALT/EQUIVALENT			
	C SHALE	315.3		
	B MARKER	338.3		
	B EQUIVALENT	344.0		
	B SALT			
	B ANHYDRITE	354.1		
	A2 CARBONATE	360.0		
	A2 SALT			
	A2 ANHYDRITE	384.8		
	A1 CARBONATE	388.0		
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH	406.5		
	ERAMOSA			
	GOAT ISLAND	427.0		
	GASPORT/MARTON	475.0		
	DECEW			
	ROCHESTER	509.3		
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL	513.1		
	THOROLD			
	GRIMSBY			
	CABOT HEAD	514.2		
	MANITOULIN	550.4		
	WHIRLPOOL			
	QUEENSTON	561.8		
	BLUE MOUNTAIN - GEORG BAY	639.7		
ORDOVICIAN	COLLINGWOOD			
	COBOURG	751.0		
	VERULAM	779.2		
	KIRKFIELD	813.0		
	COBOCONK	857.0		
	GULL RIVER	883.2		
	SHADOW LAKE	997.0		
	GAMBRIAN	998.0		
	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

T.R. Carter

CTY Essex TWP Colchester South BLK TRAC 10 LOT 81 CON I
WELL NAME GEL 17 Colchester S. 10-81-1 PERMIT 7112 INIT CLASS DEV
OPERATOR Gaiswinkler Enterprises Ltd TARGET ORD CUR STATUS DP-GS

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	Lorne T. Newport			PERMIT	1987-03-05	NORTH		m	TOP	28.3
RIG TYPE	Cable	DEPTHS		SPUD	1987-05-13	SOUTH	1720.4	m	BOT	655.9
CABLE TOP	1.2	KB ELEV	183.7	COMPTD	1988-08-11	EAST		m	TRAY	9271
BOT	655.9	LOGGER	655.9	OFFCNF	1988-09-10	WEST	54.5	m		
ROTRY TOP		DRILLER	655.9	WRKOVR		LAT	42 00 06.5			
BOT		DEEP END		ABNDND		LONG	82 58 37			
DRLG FLD		PLUG BK	645.6							

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
641.3 – 643.1	Show	966
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
339.7	71.4	29.0	SHO	0
273.1	60.3	98.5	SHO	98.5
219.0	35.7	143.0	SHO	0
177.8	29.8	391.6	CEM	0
114.3	14.1	639.5	CEM	0

COMPLETION DATA

GAS NA 10³m³/d
OIL NA m³/d
SIP 966 kPa
FORM Coburg
INTRVL 641.3-643.1 m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
641.3 – 643.1	Show	NA
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
–		
–		
–		
–		
–		
–		

PERF ☐ OPEN HOLE ☒

REMARKS

Plugged back to 645.6 between 1988-10-24 and 1988-11-04

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
32.0 –	7.6	FRE
115.0 –	7.6	MIN
160.0 – 163.8	12.2	MIN
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	MM
–			
–			
–			
–			
–			
–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB [illegible]	0.0		
	DRIFT [illegible]	1.2		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON			
	MARCELLUS			
	DUNDEE			
	COLUMBUS	28.3		
	LUCAS	44.7		
	AMHERSTBURG			
	SYLVANIA			
	BOIS BLANC	82.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	83.5		
	G SHALE	124.0		
	F SHALE	131.1		
	F SALT			
	E CARBONATE	176.0		
	D SALT/EQUIVALENT			
	C SHALE	197.5		
	B MARKER	213.4		
	B EQUIVALENT			
	B SALT			
	B ANHYDRITE	231.0		
	A2 CARBONATE	239.0		
	A2 SALT			
SILURIAN	A2 ANHYDRITE	262.1		
	A1 CARBONATE	266.0		
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH	280.4		
	ERAMOSA			
	GOAT ISLAND	307.9		
	GASPORT/WIARTON	350.5		
	DECEW			
	ROCHESTER	384.1		
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL	393.2		
	THOROLD			
	GRIMSBY			
	CABOT HEAD	395.5		
	MANITOULIN	425.0		
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON	438.9		
	BLUE MOUNTAIN - GEORG BAY	515.1		
	COLLINGWOOD			
	COBOURG	641.3		
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
CAMBRIAN				
PRECAMBRIAN				

GEOLOGY BY: T.R. Carter

CTY Essex TWP Gosfield North BLK TRAC 5 LOT 13 CON IX
WELL NAME OK West #2-W. Newman #2 Gosfield N. 5-13-IX PERMIT 7370 INIT CLASS DPT
OPERATOR Gaiswinkler Enterprises Ltd TARGET CAM CUR STATUS OPGS

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	Charles W. Rose			PERMIT	1988-08-05	NORTH		m	TOP	766
RIG TYPE	Cable	DEPTHS		SPUD	1988-07-29	SOUTH	810.8	m	BOT	1016.5
CABLE TOP	0.9	KB ELEV	192.0	COMPTD	1988-08-26	EAST	452.3	m	TRAY	3057
BOT	1017.4	LOGGER		OFFCNF	1988-09-25	WEST		m		
ROTRY TOP		DRILLER	1017.4	WRKOVR		LAT	42 08 37			
BOT		DEEP END		ABNDND		LONG	82 43 38			
DRLG FLD		PLUG BK								

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
754.4 – 761.7	Show	NA
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
339.7	71.4	33.5	SHO	0
273.1	60.3	44.5	SHO	26.2
219.0	35.7	358.8	SHO	358.8
177.8	29.8	754.4	CEM	0
114.3	14.1	817.9	PAC	0

COMPLETION DATA

GAS 10³m³/d
OIL m³/d
SIP kPa
FORM Cambrian
INTRVL 1009.8-1011.6 m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
754.4 – 761.7	Show	NA
1009.8 – 1011.6	Show	NA
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
–		
–		
–		
–		
–		
–		

PERF ☐ OPEN HOLE ☒

REMARKS

Re-entry of previously deepened and plugged back well (on Permit 5129) No new drilling.

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
21.3 –	6.0	FRE
31.0 –	6.0	FRE
53.3 –	21.0	MIN
80.2 –	21.0	MIN
372.8 –	NA	SAL
1015.6 –	NA	SAL

CORING RECORD

INTERVAL	LOCATION	NO	MM
–			
–			
–			
–			
–			
–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB [illegible]	0.0		
	DRIFT [illegible]	0.0		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON			
	MARCELLUS			
	DUNDEE	32.9		
	COLUMBUS			
	LUCAS			
	AMHERSTBURG	62.7		
	SYLVANIA			
	BOIS BLANC			
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	168.6		
	G SHALE	209.4		
	F SHALE			
	F SALT			
	E CARBONATE			
	D SALT/EQUIVALENT			
	C SHALE			
	B MARKER			
	B EQUIVALENT			
	B SALT			
	B ANHYDRITE			
	A2 CARBONATE	334.7		
	A2 SALT			
SILURIAN	A2 ANHYDRITE			
	A1 CARBONATE	361.2		
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH	369.1		
	ERAMOSA			
	GOAT ISLAND			
	GASPORT/WIARTON			
	DECEW			
	ROCHESTER	489.2		
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL	493.2		
	THOROLD			
	GRIMSBY			
	CABOT HEAD	499.6		
	MANITOULIN			
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON			
	BLUE MOUNTAIN - GEORG BAY			
	COLLINGWOOD			
	COBOURG			
	VERULAM	779.1		
	KIRKFIELD	816.9		
	COBOCONK	863.3		
	GULL RIVER	895.5		
	SHADOW LAKE	1006.8		
CAMBRIAN		1009.5		
PRECAMBRIAN				

GEOLOGY BY: T.R. Carter

CTY Essex TWP Gosfield South BLK TRAC 2 LOT 4 CON 4 SEC. WDFC
WELL NAME Cons 34311 Gosfield S. 2-4-4 SEC. WDFC PERMIT 7361 INIT CLASS NPW
OPERATOR The Consumers Gas Co. Ltd TARGET ORD CUR STATUS DH-ABD

DRILLING DATA

CONTRACTOR Underwater Gas Developers Ltd
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 193.2
BOT LOGGER 1034.0
ROTRY TOP 4.7 DRILLER 1036.4
BOT 1036.4 DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-07-22
SPUD 1988-07-29
COMPTD 1988-08-15
OFFCNF 1989-08-15
WRKOVR
ABNDND 1988- NA

COORDINATES

NORTH m
SOUTH 490.0 m
EAST m
WEST 116.5 m
LAT 42 03 01
LONG 82 48 31

SAMPLES

TOP 31.0
BOT 1034.0
TRAY 9272-
73

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244	54.0	53.0	CEM	0
178	29.8	473.5	CEM	0

COMPLETION DATA

GAS $10^3 m^3/d$
OIL m^3/d
SIP kPa
FORM
INTRVL m
m
m
PERF ☐ OPEN HOLE ☐

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
0.0 – 1030.0	SONL	SCH
20.0 – 1034.0	GRNL	"
50.0 – 1034.0	LDT	"
50.0 – 1034.0	PEF	"
53.0 – 1033.2	DLLM	"
700.0 – 1027.0	ELPR	"
725.0 – 1020.0	CBLK	"

REMARKS

Attempt to drill directionally to west was abandoned after reaching depth of 651m (34311A)

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			

A-2 Shale at 320.4

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB /LAKE ERIE	0.0		
	DRIFT /LAKE IROQUOIS	4.7		
DEVONIAN	PORT LAMBTON			
DEVONIAN	KETTLE POINT			
DEVONIAN	HAMILTON			
DEVONIAN	MARCELLUS			
DEVONIAN	DUNDEE			
DEVONIAN	COLUMBUS			
DEVONIAN	LUCAS	32.0		
DEVONIAN	AMHERSTBURG	52.4		
DEVONIAN	SYLVANIA			
DEVONIAN	BOIS BLANC	99.0		
DEVONIAN	SPRINGVALE			
DEVONIAN	ORISKANY			
SILURIAN	BASS ISLANDS	131.0		
SILURIAN	G SHALE	180.7		
SILURIAN	F SHALE	187.3		
SILURIAN	F SALT			
SILURIAN	E CARBONATE	228.1		
SILURIAN	D SALT/EQUIVALENT			
SILURIAN	C SHALE	258.4		
SILURIAN	B MARKER	279.0		
SILURIAN	B EQUIVALENT	284.5		
SILURIAN	B SALT			
SILURIAN	B ANHYDRITE	295.0		
SILURIAN	A2 CARBONATE	302.9		
SILURIAN	A2 SALT			
SILURIAN	A2 ANHYDRITE	322.1		
SILURIAN	A1 CARBONATE	327.2		
SILURIAN	A1 SALT			
SILURIAN	A1 ANHYDRITE			
SILURIAN	GUELPH	340.3		
SILURIAN	ERAMOSA			
SILURIAN	GOAT ISLAND	388.5		
SILURIAN	GASPORT/MARTON	437.2		
SILURIAN	DECEW			
SILURIAN	ROCHESTER	460.0		
SILURIAN	IRONDEQUOIT			
SILURIAN	REYNALES/FOSSIL HILL	464.1		
SILURIAN	THOROLD			
SILURIAN	GRIMSBY			
SILURIAN	CABOT HEAD	472.5		
SILURIAN	MANITOULIN	503.1		
SILURIAN	WHIRLPOOL			
ORDOVICIAN	QUEENSTON	516.4		
ORDOVICIAN	BLUE MOUNTAIN - GEORG. BAY	599.3		
ORDOVICIAN	COLLINGWOOD			
ORDOVICIAN	COBOURG	730.8		
ORDOVICIAN	VERULAM	746.4		
ORDOVICIAN	KIRKFIELD	775.0		
ORDOVICIAN	COBOCONK	827.0		
ORDOVICIAN	GULL RIVER	862.3		
ORDOVICIAN	SHADOW LAKE	960.2		
	CAMBRIAN	965.2		
	PRECAMBRIAN	1013.0		

GEOLOGY BY: T.R. Carter

CTY Essex TWP Gosfield South BLK TRAC 4 LOT 9 CON V
WELL NAME Consumers 34313 Gosfield S. 4-9-V PERMIT 7360 INIT CLASS NPW
OPERATOR The Consumers Gas Co. Ltd TARGET ORD CUR STATUS DH-ABD

DRILLING DATA

CONTRACTOR Underwater Gas Developers Ltd
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 199.9
BOT LOGGER 974.2
ROTRY TOP 4.7 DRILLER 975.0
BOT 975.0 DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-07-21
SPUD 1988-08-17
COMPTD 1988-08-24
OFFCNF 1989-08-24
WRKOVR
ABNDND 1988-08-25

COORDINATES

NORTH m
SOUTH 563.0 m
EAST m
WEST 150.0 m
LAT 42 05 50.5
LONG 82 45 15

SAMPLES

TOP 15.0
BOT 974.0
TRAY 9526-
27

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244	54.0	62.4	CEM	0
178	29.8	503.1	CEM	0

COMPLETION DATA

GAS $10^3 m^3/d$
OIL m^3/d
SIP kPa
FORM
INTRVL m
m
m
PERF ☐ OPEN HOLE ☐

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
15.0 – 973.2	GRNL	SCH
15.0 – 973.2	LDT	"
15.0 – 973.2	PEF	"
0.0 – 973.0	SONL	"
–		
–		
–		

REMARKS

Water Analysis

A-2 Shale at 340.3

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
100.0 – 102.0	NA	SUL
125.0 – 130.0	NA	SUL
869.0 – 880.0	NA	SAL
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			
–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB /LAKE ERIE	0.0		
	DRIFT /LAKE IROQUOIS	4.7		
DEVONIAN	PORT LAMBTON			
DEVONIAN	KETTLE POINT			
DEVONIAN	HAMILTON			
DEVONIAN	MARCELLUS			
DEVONIAN	DUNDEE			
DEVONIAN	COLUMBUS	38.1		
DEVONIAN	LUCAS	45.0		
DEVONIAN	AMHERSTBURG	74.0		
DEVONIAN	SYLVANIA			
DEVONIAN	BOIS BLANC	95.0		
DEVONIAN	SPRINGVALE			
DEVONIAN	ORISKANY			
SILURIAN	BASS ISLANDS	128.0		
SILURIAN	G SHALE	204.0		
SILURIAN	F SHALE	210.6		
SILURIAN	F SALT			
SILURIAN	E CARBONATE	252.3		
SILURIAN	D SALT/EQUIVALENT			
SILURIAN	C SHALE	283.0		
SILURIAN	B MARKER	301.0		
SILURIAN	B EQUIVALENT	306.5		
SILURIAN	B SALT			
SILURIAN	B ANHYDRITE	316.8		
SILURIAN	A2 CARBONATE	323.9		
SILURIAN	A2 SALT			
SILURIAN	A2 ANHYDRITE	342.4		
SILURIAN	A1 CARBONATE	347.6		
SILURIAN	A1 SALT			
SILURIAN	A1 ANHYDRITE			
SILURIAN	GUELPH	355.7		
SILURIAN	ERAMOSA			
SILURIAN	GOAT ISLAND	399.1		
SILURIAN	GASPORT/MARTON	428.6		
SILURIAN	DECEW			
SILURIAN	ROCHESTER	480.1		
SILURIAN	IRONDEQUOIT			
SILURIAN	REYNALES/FOSSIL HILL	485.2		
SILURIAN	THOROLD			
SILURIAN	GRIMSBY			
SILURIAN	CABOT HEAD	488.9		
SILURIAN	MANITOULIN	525.0		
SILURIAN	WHIRLPOOL			
ORDOVICIAN	QUEENSTON	538.2		
ORDOVICIAN	BLUE MOUNTAIN - GEORG. BAY	626.3		
ORDOVICIAN	COLLINGWOOD			
ORDOVICIAN	COBOURG	753.9		
ORDOVICIAN	VERULAM	773.8		
ORDOVICIAN	KIRKFIELD	816.3		
ORDOVICIAN	COBOCONK	857.1		
ORDOVICIAN	GULL RIVER	893.8		
ORDOVICIAN	SHADOW LAKE			
	CAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

T.R. Carter

CTY	Essex	TWP	Gosfield South	BLK	TRAC	8	LOT	12	CON V
WELL NAME	Consumers 34333 Gosfield S. 8-12-V			PERMIT	7226	INIT CLASS		NPW	
OPERATOR	Consumers Gas Co. Ltd			TARGET	ORD	CUR STATUS		OSGS-ABD	

DRILLING DATA

CONTRACTOR	Underwater Gas Developers Ltd		
RIG TYPE		DEPTHS	
CABLE TOP		KB ELEV	200.6
BOT		LOGGER	1055.0
ROTRY TOP	4.8	DRILLER	1057.0
BOT	1057.0	DEEP END	
DRLG FLD		PLUG BK	

DATES

PERMIT	1988-01-12
SPUD	1988-01-30
COMPTD	1988-02-08
OFFCNF	1989-02-08
WRKOVR	
ABNDND	1988-02-09

COORDINATES

NORTH	247.5	m
SOUTH		m
EAST	415.6	m
WEST		m
LAT	42 05 29	
LONG	82 43 59	

SAMPLES

TOP	27.0
BOT	1047.0
TRAY	9262-
	63

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
780.0 –	Show	NA
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244	54.0	50.6	CEM	0
178	29.8	488.3	CEM	108.8

COMPLETION DATA

GAS	$10^3 m^3/d$
OIL	m^3/d
SIP	kPa
FORM	
INTRVL	m
	m
	m
PERF ☐	OPEN HOLE ☐

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
40.0 –	Show	NA
780.0 –	Show	NA
830.0 –	Show	NA
838.0 –	Show	NA
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
10.0 – 1054.0	GRNL	SCH
10.0 – 1054.0	LDT	"
10.0 – 1054.0	PEF	"
10.0 – 1051.0	SONL	"
50.6 – 1054.2	DLLM	"
750.0 – 1050.0	ELPR	"
–		

REMARKS

Water Analysis

A-2 Shale at 342.0

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
53.0 –	NA	SUL
94.0 –	NA	SUL
175.0 –	NA	SUL
860.0 –	NA	SAL
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	ANAL
–			
–			
–			
–			
–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / [illegible]	0.0		
	DRIFT / [illegible]	4.8		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON			
	MARCELLUS			
	DUNDEE	29.3		
	COLUMBUS			
	LUCAS	54.0		
	AMHERSTBURG	78.0		
	SYLVANIA			
	BOIS BLANC	126.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	136.0		
	G SHALE	207.0		
	F SHALE	213.8		
	F SALT			
	E CARBONATE	255.4		
	D SALT/EQUIVALENT			
	C SHALE	285.2		
	B MARKER	301.2		
	B EQUIVALENT	306.9		
	B SALT			
	B ANHYDRITE	317.0		
	A2 CARBONATE	324.9		
	A2 SALT			
SILURIAN	A2 ANHYDRITE	343.8		
	A1 CARBONATE	349.3		
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH	358.1		
	ERAMOSA			
	GOAT ISLAND	390.8		
	GASPORT/WIARTON	405.4		
	DECEW			
	ROCHESTER	478.9		
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL	482.8		
	THOROLD			
	GRIMSBY			
ORDOVICIAN	CABOT HEAD	488.0		
	MANITOULIN	524.4		
	WHIRLPOOL			
	QUEENSTON	538.0		
	BLUE MOUNTAIN - GEORG. BAY	620.7		
	COLLINGWOOD			
	COBOURG	756.8		
	VERULAM	779.8		
	KIRKFIELD	816.0		
	COBOCONK	859.8		
	GULL RIVER	898.6		
	SHADOW LAKE	992.5		
	CAMBRIAN	995.7		
	PRECAMBRIAN	1032.0		

GEOLOGY BY: T.R. Carter

CTY	Essex	TWP	Mersea	BLK	TRAC	1	LOT	15	CON B
WELL NAME	Cons et al 34106 Mersea 1-15-B			PERMIT	7225	INIT CLASS		DEV	
OPERATOR	Consumers Gas Co. Ltd			TARGET	ORD	CUR STATUS		OPGS	

DRILLING DATA

CONTRACTOR	Underwater Gas Developers Ltd		
RIG TYPE	Rotary	DEPTHS	
CABLE TOP		KB ELEV	181.5
BOT		LOGGER	878.8
ROTRY TOP	4.8	DRILLER	881.0
BOT	881.0	DEEP END	
DRLG FLD		PLUG BK	

DATES

PERMIT	1988-01-12
SPUD	1988-01-19
COMPTD	1988-01-26
OFFCNF	1988-02-25
WRKOVR	1989-12-02
ABNDND	

COORDINATES

NORTH		m
SOUTH	330.0	m
EAST		m
WEST	30.0	m
LAT	42 00 55	
LONG	82 32 10	

SAMPLES

TOP	3.0
BOT	861.0
TRAY	9464-
	65

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
780 –	Show	NA
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244	54	56.6	CEM	0
178	29.8	474.6	CEM	0
114	14.1	871.6	CEM	0
60	7.0	783.6	HAN	0

COMPLETION DATA

GAS	0.7 $10^3 m^3/d$
OIL	7.9 m^3/d
SIP	200 kPa
FORM	Cobourg
INTRVL	774.0-775.0 m
	781.0-783.5 m
	786.5-793.5 m
PERF ☒	OPEN HOLE ☐

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
780 –	Show	NA
783 –	Show	NA
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
473.0 – 878.0	GRNL	SCH
473.0 – 878.0	LDT	"
473.0 – 878.0	PEF	"
473.0 – 878.5	DLLM	"
25.0 – 473.0	SONL	"
450.0 – 853.5	CBVD	"
450.0 – 850.0	CBND	"

REMARKS

Oil Analyses

DST #1 - 795.0-803.0

DST #2 - 776.0-786.0

CMPL - 750.0-850.0

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
84 –	Show	SUL
150 –	Show	SUL
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	ANAL
–			
–			
–			
–			
–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / [illegible]	0.0		
	DRIFT / [illegible]	4.8		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON			
	MARCELLUS			
	DUNDEE	27.8		
	COLUMBUS			
	LUCAS	57.0		
	AMHERSTBURG			
	SYLVANIA			
	BOIS BLANC	114.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	122.0		
	G SHALE	165.3		
	F SHALE	172.4		
	F SALT			
	E CARBONATE	211.3		
	D SALT/EQUIVALENT			
	C SHALE	233.0		
	B MARKER	257.0		
	B EQUIVALENT	262.4		
	B SALT			
	B ANHYDRITE	271.8		
	A2 CARBONATE	278.8		
	A2 SALT			
SILURIAN	A2 ANHYDRITE	294.7		
	A1 CARBONATE	297.4		
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH	305.1		
	ERAMOSA			
	GOAT ISLAND			
	GASPORT/WIARTON			
	DECEW			
	ROCHESTER	468.1		
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL	474.0		
	THOROLD			
	GRIMSBY			
ORDOVICIAN	CABOT HEAD	478.1		
	MANITOULIN	516.6		
	WHIRLPOOL			
	QUEENSTON	526.7		
	BLUE MOUNTAIN - GEORG. BAY	614.0		
	COLLINGWOOD			
	COBOURG	774.1		
	VERULAM	790.5		
	KIRKFIELD	830.8		
	COBOCONK	866.1		
	GULL RIVER			
	SHADOW LAKE			
	CAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY	Essex	TWP	Mersea	BLK		TRAC	6	LOT	16	CON	VIII
WELL NAME	RAM/BP 3 Mersea 6-16-VIII			PERMIT	7330	INIT CLASS	DEV				
OPERATOR	Ram Petroleums Ltd			TARGET	ORD	CUR STATUS	OPGS				

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	Corunna Drilling Ltd			PERMIT	1988-07-04	NORTH	483.0 m	TOP	53.0	
RIG TYPE	Rotary	DEPTHS		SPUD	1988-07-05	SOUTH	m	BOT	966.0	
CABLE TOP		KB ELEV	194.8	COMPTD	1988-07-12	EAST	107.0 m	TRAY	9511-	
BOT		LOGGER	966.5	OFFCNF	1988-08-11	WEST	m		12	
ROTRY TOP	3.7	DRILLER	966.5	WRKOVR	1989-07-20	LAT	42 07 27.5			
BOT	966.5	DEEP END		ABNDND		LONG	82 31 37			
DRLG FLD		PLUG BK								

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS	$10^3 m^3/d$
610.5 – 616.0	NA	NA	299	62.5	53.2	CEM	0	OIL 20	m^3/d
756.5 –	NA	NA	219	35.7	503.0	CEM	0	SIP NA	kPa
800.5 –	NA	NA	140	NA	957.8	CEM	0	FORM Cobourg Verulam	
–								INTRVL 809.5-816.0	m
–								818.0-823.0	m
–									m

INITIAL OIL RECORD			LOGGING RECORD			PERF ☒ OPEN HOLE ☐
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	REMARKS
805.5 – 867.5	NA	NA	560.0 – 948.3	GRNL	CMPL	DST #1 - 790.0-826.8
–			560.0 – 948.3	CCL	"	DST #2 - 833.0-856.0
–			785.0 – 885.0	FMS	SCH	
–			503.0 – 962.0	ELPR	"	Water Analysis
–			–			Build-up Test
INITIAL WATER RECORD			–			Oil Analysis
INTERVAL	STAT LEV	TYPE	CORING RECORD			
–			INTERVAL	LOCATION	NO	mm
–			–			
–			–			
–			–			
–			–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / LAKE LEVEL	0.0		
	DRIFT / LAKE BOTTOM	3.7		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON			
	MARCELLUS			
	DUNDEE	39.4		
	COLUMBUS			
	LUCAS	69.0		
	AMHERSTBURG	101.0		
	SYLVANIA			
	BOIS BLANC	146.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	163.5		
	G SHALE	212.8		
	F SHALE	220.0		
	F SALT			
	E CARBONATE	261.3		
	D SALT/EQUIVALENT			
	C SHALE	290.8		
	B MARKER	316.0		
	B EQUIVALENT	321.4		
	B SALT			
	B ANHYDRITE	330.7		
	A2 CARBONATE	338.5		
	A2 SALT			

SILURIAN	A2 ANHYDRITE	353.9		
	A1 CARBONATE	358.5		
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH	368.4		
	ERAMOSA			
	GOAT ISLAND			
	GASPORT/WIARTON			
	DECEW			
	ROCHESTER	497.9		
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL	503.4		
	THOROLD			
	GRIMSBY			
	CABOT HEAD	507.1		
	MANITOULIN	545.0		
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON	555.6		
	BLUE MOUNTAIN - GEORG. BAY	643.1		
	COLLINGWOOD			
	COBOURG	789.1		
	VERULAM	808.5		
	KIRKFIELD	853.4		
	COBOCONK	890.3		
	GULL RIVER	919.8		
	SHADOW LAKE			
	CAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY	Essex	TWP	Mersea	BLK		TRAC	8	LOT	16	CON	VIII
WELL NAME	RAM/BP 2 Mersea 8-16-VIII			PERMIT	7231	INIT CLASS	NPW				
OPERATOR	Ram Petroleums Ltd			TARGET	ORD	CUR STATUS	OPGS				

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	B and S Rotary Drilling			PERMIT	1988-02-01	NORTH	293.0 m	TOP	49.0	
RIG TYPE	Rotary	DEPTHS		SPUD	1988-02-11	SOUTH	m	BOT	1077.0	
CABLE TOP		KB ELEV	194.5	COMPTD	1988-02-24	EAST	m	TRAY	9209-	
BOT		LOGGER	1077.0	OFFCNF	1989-02-24	WEST	152.0 m		10	
ROTRY TOP	3.5	DRILLER	1077.0	WRKOVR	1988-05-11	LAT	42 07 21			
BOT	1077.0	DEEP END		ABNDND		LONG	82 31 23.5			
DRLG FLD		PLUG BK								

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS GOR 58m^3/m^3	$10^3 m^3/d$
764.5 –	Show	NA	299	62.5	48.7	CEM	0	OIL 24 on 3.97 mm choke	m^3/d
775.0 –	Show	NA	219	36.0	501.5	CEM	0	SIP	kPa
–			140	20.8	1072.6	CEM	0	FORM Cobourg	
–			73	9.7	808.3	HAN	0	INTRVL	m
–									m
–									m

INITIAL OIL RECORD			LOGGING RECORD			PERF ☒ OPEN HOLE ☐
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	REMARKS
779.0 – 830.0	Show	NA	750.0 – 894.0	CMPL	CMPL	Water Analysis
–			650.0 – 1054.0	CBND	"	Condensate Analysis
–			502.0 – 1076.0	DLLM	SCH	Gas Analysis
–			502.0 – 1076.2	PEF	"	Oil Analysis
–			502.0 – 1076.2	GRNL	"	Build-up Test
INITIAL WATER RECORD			502.0 – 1076.2	LDT	"	
INTERVAL	STAT LEV	TYPE	20.0 – 1073.5	SONL	"	DST #1 791.5-828.0
–			CORING RECORD			
–			INTERVAL	LOCATION	NO	mm
–			–			
–			–			
–			–			
–			–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / LAKE LEVEL	0.0		
	DRIFT / LAKE BOTTOM	3.5		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON			
	MARCELLUS			
	DUNDEE	39.2		
	COLUMBUS			
	LUCAS	76.0		
	AMHERSTBURG	103.0		
	SYLVANIA			
	BOIS BLANC	156.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	169.0		
	G SHALE	216.2		
	F SHALE	225.0		
	F SALT			
	E CARBONATE	265.0		
	D SALT/EQUIVALENT			
	C SHALE	293.8		
	B MARKER	315.3		
	B EQUIVALENT	320.9		
	B SALT			
	B ANHYDRITE	329.9		
	A2 CARBONATE	337.8		
	A2 SALT			

SILURIAN	A2 ANHYDRITE	353.1		
	A1 CARBONATE	357.9		
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH	367.6		
	ERAMOSA			
	GOAT ISLAND			
	GASPORT/WIARTON			
	DECEW			
	ROCHESTER	498.3		
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL	504.6		
	THOROLD			
	GRIMSBY			
	CABOT HEAD	508.0		
	MANITOULIN	543.0		
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON	556.7		
	BLUE MOUNTAIN - GEORG. BAY	642.9		
	COLLINGWOOD			
	COBOURG	791.3		
	VERULAM	811.4		
	KIRKFIELD	854.1		
	COBOCONK	892.7		
	GULL RIVER	921.3		
	SHADOW LAKE	1027.3		
	CAMBRIAN	1029.4		
	PRECAMBRIAN	1061.5		

GEOLOGY BY: T.R. Carter

T.R. Carter

CTY	Essex	TWP	Mersea	BLK	TRAC 7	LOT 17	CON VIII		
WELL NAME	Cons et al 34152 Mersea 7-17-VIII			PERMIT	7409	INIT CLASS	DEV		
OPERATOR	The Consumers Gas Co. Ltd			TARGET	ORD	CUR STATUS	OP		

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	Underwater Gas Developers Ltd			PERMIT	1988-10-06	NORTH	318.0	m	TOP	12.0
RIG TYPE	Rotary	DEPTHS		SPUD	1988-10-11	SOUTH		m	BOT	915.0
CABLE TOP		KB ELEV	195.7	COMPTD	1988-10-19	EAST	113.5	m	TRAY	9541-
BOT		LOGGER	914.7	OFFCNF	1988-11-18	WEST		m		42
ROTRY TOP	4.7	DRILLER	915.0	WRKOVR	1989-04-08	LAT	42 07 21			
BOT	915.0	DEEP END		ABNDND		LONG	82 31 12			
DRLG FLD		PLUG BK								

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS 1.2	10 ^{3}m^3/d
–			244	54.0	53.0	CEM	0	OIL 20.0	m^3/d
–			178	29.8	515.7	CEM	0	SIP 800	kPa
–			114	14.0	915.0	CEM	0	FORM Cobourg-Verulam	
–			60	7.0	825.9	HAN	0	INTRVL 809.0-824.0	m
–			60	7.0	796.0	HAN	0		m
–									m

INITIAL OIL RECORD			LOGGING RECORD			
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	PERF ☒ OPEN HOLE ☐
814.0 –	Show	NA	515.5 – 913.7	GRNL	SCH	REMARKS
–			515.5 – 913.7	LDT	"	DST #1 - 838.0-857.0
–			515.5 – 913.7	PEF	"	DST #2 - 807.0-827.0
–			20.0 – 911.5	SONL	"	
–			515.5 – 914.4	DLLM	"	A-2 Shale at 357.6
–			515.5 – 914.4	CBLK	"	
INITIAL WATER RECORD			750.0 – 877.0	GRNL	CMPL	

INITIAL WATER RECORD			CORING RECORD				
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	ABN	
181.0 –	NA	SUL	–				
195.0 –	NA	SUL	–				CMPL Logs Cont.
–			–				CBND - 520.0-875.0
–			–				CCL - 750.0-877.0
–			–				

GEOLOGICAL CONTACTS		TOP	ELEV	THICK					
	KB / LAKE LEVEL	0.0				A2 ANHYDRITE	358.8		
	DRIFT / LAKE BOTTOM	4.7				A1 CARBONATE	363.2		
DEVONIAN	PORT LAMBTON					A1 SALT			
	KETTLE POINT					A1 ANHYDRITE			
	HAMILTON					GUELPH	372.6		
	MARCELLUS					ERAMOSA			
	DUNDEE	38.5				GOAT ISLAND			
	COLUMBUS				SILURIAN	GASPORT/WIARTON			
	LUCAS	63.0				DECEW			
	AMHERSTBURG	105.0				ROCHESTER	499.0		
	SYLVANIA					IRONDEQUOIT			
	BOIS BLANC	167.0				REYNALES/FOSSIL HILL	505.3		
	SPRINGVALE					THOROLD			
	ORISKANY					GRIMSBY			
	BASS ISLANDS	180.5				CABOT HEAD	508.5		
	G SHALE	222.2				MANITOULIN	547.1		
	F SHALE	229.2				WHIRLPOOL			
	F SALT					QUEENSTON	507.7		
	E CARBONATE	270.2				BLUE MOUNTAIN - GEORG BAY	645.5		
	D SALT/EQUIVALENT				ORDOVICIAN	COLLINGWOOD			
SILURIAN	C SHALE	300.0				COBOURG	793.3		
	B MARKER	320.0				VERULAM	812.3		
	B EQUIVALENT	325.6				KIRKFIELD	856.0		
	B SALT					COBOCONK	894.4		
	B ANHYDRITE	334.1				GULL RIVER			
	A2 CARBONATE	343.2				SHADOW LAKE			
	A2 SALT					CAMBRIAN			
						PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY	Essex	TWP	Mersea	BLK	TRAC 7	LOT 18	CON VIII		
WELL NAME	Cons et al 34151 Mersea 7-18-VIII			PERMIT	7242	INIT CLASS	DEV		
OPERATOR	Consumers Gas Co. Ltd			TARGET	ORD	CUR STATUS	OS-SUS		

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	Underwater Gas Developers Ltd			PERMIT	1988-02-19	NORTH	117.0	m	TOP	42.0
RIG TYPE	Rotary	DEPTHS		SPUD	1988-02-23	SOUTH		m	BOT	1090.0
CABLE TOP		KB ELEV	195.5	COMPTD	1988-03-05	EAST	107.0	m	TRAY	9212-
BOT		LOGGER	1088.8	OFFCNF	1988-04-04	WEST		m		13
ROTRY TOP	4.7	DRILLER	1090.0	WRKOVR		LAT	42 07 14			
BOT	1090.0	DEEP END		ABNDND		LONG	82 30 45			
DRLG FLD		PLUG BK								

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS	10 ^{3}m^3/d
–			244	54.0	61.1	CEM	0	OIL	m^3/d
–			178	29.8	527.4	CEM	0	SIP	kPa
–								FORM	
–								INTRVL	m
–									m
–									m

INITIAL OIL RECORD			LOGGING RECORD			
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	PERF ☐ OPEN HOLE ☐
808.5 –	Show	NA	50.0 – 1088.0	GRNL	SCH	REMARKS
837.0 –	Show	NA	50.0 – 1088.0	LDT	"	Oil Analysis
–			50.0 – 1088.0	PEF	"	Core Analysis
–			61.0 – 1085.0	SONL	"	Gradient Test
–			526.0 – 1076.3	DLLM	"	
–			–			A-2 Shale at 354.3
INITIAL WATER RECORD			–			

INITIAL WATER RECORD			CORING RECORD				
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	ABN	
84.0 –	NA	SUL	797.5 – 808.5	PRL	946	Yes	
187.0 –	NA	SUL	808.5 – 823.0	PRL	946	"	
–			823.0 – 837.0	PRL	946	"	
–			–				
–			–				

GEOLOGICAL CONTACTS		TOP	ELEV	THICK					
	KB / LAKE LEVEL	0.0				A2 ANHYDRITE	356.8		
	DRIFT / LAKE BOTTOM	4.7				A1 CARBONATE	359.9		
DEVONIAN	PORT LAMBTON					A1 SALT			
	KETTLE POINT					A1 ANHYDRITE			
	HAMILTON					GUELPH	369.2		
	MARCELLUS					ERAMOSA			
	DUNDEE	40.5				GOAT ISLAND			
	COLUMBUS				SILURIAN	GASPORT/WIARTON			
	LUCAS	84.0				DECEW			
	AMHERSTBURG	107.0				ROCHESTER	501.4		
	SYLVANIA					IRONDEQUOIT			
	BOIS BLANC	155.0				REYNALES/FOSSIL HILL	507.7		
	SPRINGVALE					THOROLD			
	ORISKANY					GRIMSBY			
	BASS ISLANDS	175.0				CABOT HEAD	511.3		
	G SHALE	218.4				MANITOULIN	546.5		
	F SHALE	227.2				WHIRLPOOL			
	F SALT					QUEENSTON	560.1		
	E CARBONATE	267.4				BLUE MOUNTAIN - GEORG BAY	645.0		
	D SALT/EQUIVALENT				ORDOVICIAN	COLLINGWOOD			
SILURIAN	C SHALE	296.3				COBOURG	796.0		
	B MARKER	315.7				VERULAM	816.4		
	B EQUIVALENT	321.6				KIRKFIELD	857.1		
	B SALT					COBOCONK	895.4		
	B ANHYDRITE	331.4				GULL RIVER	924.3		
	A2 CARBONATE	338.0				SHADOW LAKE	1031.0		
	A2 SALT					CAMBRIAN	1031.8		
						PRECAMBRIAN	1063.1		

GEOLOGY BY: T.R. Carter

CTY Essex TWP Tilbury North BLK TRAC 8 LOT 16 CON VIII

WELL NAME Ran BP #9 Tilbury N. 8-16-VIII PERMIT 7423 INIT CLASS NPW

OPERATOR Ran Petroleums TARGET SAL CUR STATUS GS-ABD

DRILLING DATA

CONTRACTOR Corunna Rotary Drilling
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 186.6
BOT LOGGER 534.6
ROTRY TOP 3.7 DRILLER 535.0
BOT 535.0 DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-11-28
SPUD 1988-11-28
COMPTD 1988-12-03
OFFCNF 1989-12-03
WRKOVR
ABNDND 1988-12-06

COORDINATES

NORTH 107.6 m
SOUTH m
EAST m
WEST 107.6 m
LAT 42 12 15
LONG 82 28 55

SAMPLES

TOP 60.0
BOT 535.0
TRAY 6730

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
360.0 – 378.0	Show	NA
404.0 – 408.0	Show	NA
414.0 – 421.0	Show	NA
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
299	62.5	53.5	CEM	0
219	35.7	305.0	CEM	0

COMPLETION DATA

GAS $10^3m^3/d$
OIL m^3/d
SIP kPa
FORM
INTRVL m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
40.0 – 533.8	GRNL	SCH
305.0 – 533.8	LDT	"
305.0 – 533.8	PEF	"
305.0 – 524.0	SONL	"
305.0 – 530.0	DLLM	"
–		
–		

PERF ☐ OPEN HOLE ☐

REMARKS

DST #1 - 346.0-377.0
DST #2 - 359.0-366.0
DST #3 - 386.0-397.0

Core Analysis
Water Analysis
Gas Analysis

Replugged in 1989-10-03

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	ANAL
363.0 – 378.3	Company		Yes
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / KELLY BUSHING	0.0		
DRIFT / KANDSURFACE	3.7		
DEVONIAN: PORT LAMBTON			
KETTLE POINT			
HAMILTON			
MARCELLUS			
DUNDEE	38.0		
COLUMBUS			
LUCAS	87.0		
AMHERSTBURG	110.0		
SYLVANIA			
BOIS BLANC	153.0		
SPRINGVALE			
ORISKANY			
SILURIAN: BASS ISLANDS	168.0		
G SHALE	217.0		
F SHALE	225.0		
F SALT			
E CARBONATE	266.9		
D SALT/EQUIVALENT			
C SHALE	296.0		
B MARKER	335.6		
B EQUIVALENT	342.8		
B SALT			
B ANHYDRITE	352.4		
A2 CARBONATE	359.2		
A2 SALT			
A2 ANHYDRITE	378.2		
A1 CARBONATE	384.2		
A1 SALT			
A1 ANHYDRITE			
GUELPH	392.0		
ERAMOSA			
GOAT ISLAND	437.7		
GASPORT/WIARTON	478.0		
DECEW			
ROCHESTER	515.0		
IRONDEQUOIT			
REYNALES/FOSSIL HILL	521.3		
THOROLD			
GRIMSBY			
CABOT HEAD	524.1		
MANITOULIN			
WHIRLPOOL			
ORDOVICIAN: QUEENSTON			
BLUE MOUNTAIN - GEORG BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Haldimand TWP Canborough BLK TRAC 2 LOT 9 CON II

WELL NAME Egger 1 Canborough 2-9-II PERMIT 7254 INIT CLASS DEV

OPERATOR Richard Egger TARGET CLI CUR STATUS GP

DRILLING DATA

CONTRACTOR Murray Rose Drilling
RIG TYPE Cable DEPTHS
CABLE TOP 0.3 KB ELEV 178.0
BOT 174.6 LOGGER
ROTRY TOP DRILLER 174.6
BOT DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-03-21
SPUD 1988-03-21
COMPTD 1988-04-14
OFFCNF 1988-05-14
WRKOVR
ABNDND

COORDINATES

NORTH 106.6 m
SOUTH m
EAST 295.8 m
WEST m
LAT 42 59 13
LONG 79 37 30

SAMPLES

TOP 18.6
BOT 173.7
TRAY 8054

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
143.9 –	Show	551.6
170.7 –	Show	551.6
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
219	35.7	22.9	SHO	0
114	14.1	122.5	CEM	0

COMPLETION DATA

GAS 0.08 $10^3m^3/d$
OIL m^3/d
SIP 551.6 kPa
FORM Grimsby, Whirlpool
INTRVL 143.9 m
170.7 m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
–		
–		
–		
–		
–		
–		

PERF ☐ OPEN HOLE ☒

REMARKS

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
26.2 –	6.1	FRE
64.0 –	6.1	SUL
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	ANAL
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / LAKE LEVEL	0.0		
DRIFT / LAKE BOTTOM	0.3		
DEVONIAN: PORT LAMBTON			
KETTLE POINT			
HAMILTON			
MARCELLUS			
DUNDEE			
COLUMBUS			
LUCAS			
AMHERSTBURG			
SYLVANIA			
BOIS BLANC			
SPRINGVALE			
ORISKANY			
SILURIAN: BASS ISLANDS			
G SHALE			
F SHALE			
F SALT			
E CARBONATE			
D SALT/EQUIVALENT			
C SHALE	22.9		
B MARKER			
B EQUIVALENT			
B SALT			
B ANHYDRITE			
A2 CARBONATE	27.6		
A2 SALT			
A2 ANHYDRITE			
A1 CARBONATE	33.2		
A1 SALT			
A1 ANHYDRITE			
GUELPH	43.0		
ERAMOSA			
GOAT ISLAND			
GASPORT/WIARTON			
DECEW	109.7		
ROCHESTER	122.0		
IRONDEQUOIT			
REYNALES/FOSSIL HILL	133.2		
THOROLD	135.3		
GRIMSBY	138.7		
CABOT HEAD	150.7		
MANITOULIN	161.1		
WHIRLPOOL	169.4		
ORDOVICIAN: QUEENSTON	172.8		
BLUE MOUNTAIN - GEORG BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

T.R. Carter

CTY Haldimand TWP Dunn BLK TRAC 2 LOT 5 CON Sheehan
WELL NAME Pat 4 Dunn 2-5-Sheehan Tract PERMIT 7392 INIT CLASS DEV Tract
OPERATOR Patricia Farms Ltd TARGET CL1 CUR STATUS GP

DRILLING DATA

CONTRACTOR Elgin Mitchell
RIG TYPE Rotary DEPTHS
CABLE TOOL KB ELEV 188.5
BOT LOGGER
ROTRY TOP 0.0 DRILLER 259.1
BOT 259.1 DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-09-07
SPUD 1988-09-07
COMPTD 1988-09-19
OFFCNF 1988-10-19
WRKOVR
ABNDND

COORDINATES

NORTH m
SOUTH 100.6 m
EAST 909.3 m
WEST m
LAT 42 52 33.5
LONG 79 35 34

SAMPLES

TOP 2.4
BOT 259.1
TRAY 6829

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
222.8 – 223.4	Show	NA
225.9 – 227.7	Show	NA
228.3 – 229.5	0.3	3102.6
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
219	35.7	7.6	BAR	0
114	14.1	210.3	HWP	0

COMPLETION DATA

GAS 0.3 $10^3 m^3/d$
OIL m^3/d
SIP 3102 kPa
FORM Grimsby
INTRVL 228.3-229.5 m
m
m
PERF ☐ OPEN HOLE ☒

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
–		
–		
–		
–		
–		
–		

REMARKS

KB elevation not reported - used ground elevation

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
16.8 –	NA	FRE
126.5 –	NA	SUL
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	AMAL
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / [illegible]	0.0		
DRIFT / [illegible]			
DEVONIAN: PORT LAMBTON			
DEVONIAN: KETTLE POINT			
DEVONIAN: HAMILTON			
DEVONIAN: MARCELLUS			
DEVONIAN: DUNDEE			
DEVONIAN: COLUMBUS			
DEVONIAN: LUCAS			
DEVONIAN: AMHERSTBURG	3.1		
DEVONIAN: SYLVANIA			
DEVONIAN: BOIS BLANC	22.2		
DEVONIAN: SPRINGVALE			
DEVONIAN: ORISKANY			
SILURIAN: BASS ISLANDS	28.3		
SILURIAN: G SHALE			
SILURIAN: F SHALE	35.0		
SILURIAN: F SALT			
SILURIAN: E CARBONATE	49.3		
SILURIAN: D SALT/EQUIVALENT			
SILURIAN: C SHALE	89.5		
SILURIAN: B MARKER	99.5		
SILURIAN: B EQUIVALENT	110.0		
SILURIAN: B SALT			
SILURIAN: B ANHYDRITE			
SILURIAN: A2 CARBONATE	-15.5		
SILURIAN: A2 SALT			
A2 ANHYDRITE			
A1 CARBONATE			
A1 SALT			
A1 ANHYDRITE			
GUELPH	128.5		
ERAMOSA			
GOAT ISLAND			
GASPORT/WIARTON			
DECEW	192.3		
ROCHESTER	201.0		
IRONDEQUOIT	214.0		
REYNALES/FOSSIL HILL	217.3		
THOROLD	221.8		
GRIMSBY	225.0		
CABOT HEAD	239.5		
MANITOULIN	248.5		
WHIRLPOOL	253.2		
ORDOVICIAN: QUEENSTON	256.0		
ORDOVICIAN: BLUE MOUNTAIN - GEORG BAY			
ORDOVICIAN: COLLINGWOOD			
ORDOVICIAN: COBOURG			
ORDOVICIAN: VERULAM			
ORDOVICIAN: KIRKFIELD			
ORDOVICIAN: COBOCONK			
ORDOVICIAN: GULL RIVER			
ORDOVICIAN: SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Haldimand TWP Lake Erie BLK 23 TRAC G LOT CON
WELL NAME Pembina Lake Erie 23-G-3 PERMIT 7344 INIT CLASS DEV
OPERATOR Pembina Exploration Ltd TARGET CL1 CUR STATUS GP

DRILLING DATA

CONTRACTOR Pembina Resources Ltd
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 180.4
BOT LOGGER 340.1
ROTRY TOP 26.7 DRILLER 340.0
BOT 340.0 DEEP END
DRLG FLD PLUG BK 326.2

DATES

PERMIT 1988-07-11
SPUD 1988-09-15
COMPTD 1988-09-23
OFFCNF 1988-10-23
WRKOVR
ABNDND

COORDINATES

NORTH m
SOUTH m
EAST m
WEST m
LAT 42 48 07.1
LONG 79 28 45.9

SAMPLES

TOP 63.0
BOT 339.0
TRAY 7721

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
287.0 – 289.0	Show	NA
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244	53.6	60.0	CEM	0
178	25.3	87.1	CEM	0
114	14.1	336.9	CEM	0
60	7.0	284.0	HAN	0

COMPLETION DATA

GAS 2.9 $10^3 m^3/d$
OIL m^3/d
SIP NA kPa
FORM Grimsby
INTRVL 287.0-289.0 m
m
m
PERF ☒ OPEN HOLE ☐

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
26.8 – 339.5	GRNL	CMPL
26.8 – 339.5	DENL	"
26.8 – 339.5	LASL	"
86.8 – 339.2	DIL	"
275.0 – 327.0	CMPL	"
–		
–		

REMARKS

* Operator pick

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	AMAL
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB LAKE LEVEL	6.0		
DRIFT / LAKE BOTTOM	26.7		
DEVONIAN: PORT LAMBTON			
DEVONIAN: KETTLE POINT			
DEVONIAN: HAMILTON			
DEVONIAN: MARCELLUS			
DEVONIAN: DUNDEE			
DEVONIAN: COLUMBUS			
DEVONIAN: LUCAS			
DEVONIAN: AMHERSTBURG	49.2		
DEVONIAN: SYLVANIA			
DEVONIAN: BOIS BLANC	* 62.3		
DEVONIAN: SPRINGVALE			
DEVONIAN: ORISKANY			
SILURIAN: BASS ISLANDS	65.3		
SILURIAN: G SHALE	75.2		
SILURIAN: F SHALE	81.7		
SILURIAN: F SALT			
SILURIAN: E CARBONATE	119.4		
SILURIAN: D SALT/EQUIVALENT			
SILURIAN: C SHALE	141.1		
SILURIAN: B MARKER	150.3		
SILURIAN: B EQUIVALENT	156.0		
SILURIAN: B SALT			
SILURIAN: B ANHYDRITE	164.3		
SILURIAN: A2 CARBONATE	168.8		
SILURIAN: A2 SALT			
A2 ANHYDRITE			
A1 CARBONATE	177.4		
A1 SALT			
A1 ANHYDRITE			
GUELPH	182.9		
ERAMOSA			
GOAT ISLAND			
GASPORT/WIARTON			
DECEW	238.8		
ROCHESTER	255.4		
IRONDEQUOIT	267.4		
REYNALES/FOSSIL HILL	269.3		
THOROLD	272.7		
GRIMSBY	276.2		
CABOT HEAD	289.0		
MANITOULIN			
WHIRLPOOL	306.8		
ORDOVICIAN: QUEENSTON	311.0		
ORDOVICIAN: BLUE MOUNTAIN - GEORG BAY			
ORDOVICIAN: COLLINGWOOD			
ORDOVICIAN: COBOURG			
ORDOVICIAN: VERULAM			
ORDOVICIAN: KIRKFIELD			
ORDOVICIAN: COBOCONK			
ORDOVICIAN: GULL RIVER			
ORDOVICIAN: SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Haldimand TWP Lake Erie BLK 23 TRAC K-3 LOT CON

WELL NAME Pembina Lake Erie 23-K-3 PERMIT 7342 INIT CLASS DEV

OPERATOR Pembina Exploration Ltd TARGET CLI CUR STATUS GS-ABD

DRILLING DATA

CONTRACTOR Pembina Resources Ltd
RIG TYPE Rotary DEPTHS
CABLE TOOL KB ELEV 180.4
BOT LOGGER 344.8
ROTRY TOP 27.5 DRILLER 345.0
BOT 345.0 DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-07-11
SPUD 1988-09-24
COMPTD 1988-09-27
OFFCNF 1988-10-27
WRKOVR
ABNDND 1988-09-28

COORDINATES

NORTH m
SOUTH m
EAST m
WEST m
LAT 42 47 11.2
LONG 79 25 46.1

SAMPLES

TOP 69.0
BOT 345.0
TRAY 5207

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
274.0 – 275.0	Show	NA
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244	53.6	67.0	CEM	0
178	25.3	102.6	CEM	0

COMPLETION DATA

GAS $10^3 m^3/d$
OIL m^3/d
SIP kPa
FORM
INTRVL m
m
m
PERF ☐ OPEN HOLE ☐

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
21.8 – 344.2	GRNL	CMPL
21.8 – 344.2	DENL	"
21.8 – 344.2	LASL	"
102.6 – 343.9	DIL	"
–		
–		
–		

REMARKS

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	ANAL
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / LAKE LEVEL	6.0		
DRIFT / LAKE BOTTOM	24.5		
DEVONIAN: PORT LAMBTON			
KETTLE POINT			
HAMILTON			
MARCELLUS			
DUNDEE			
COLUMBUS			
LUCAS			
AMHERSTBURG	57.3		
SYLVANIA			
BOIS BLANC	70.2		
SPRINGVALE			
ORISKANY			
SILURIAN: BASS ISLANDS	73.2		
G SHALE	80.9		
F SHALE	87.2		
F SALT			
E CARBONATE	121.3		
D SALT/EQUIVALENT			
C SHALE	144.9		
B MARKER	154.0		
B EQUIVALENT	159.9		
B SALT			
B ANHYDRITE	168.7		
A2 CARBONATE	173.0		
A2 SALT			
A2 ANHYDRITE			
A1 CARBONATE	181.2		
A1 SALT			
A1 ANHYDRITE			
GUELPH	189.0		
ERAMOSA			
GOAT ISLAND			
GASPORT/WIARTON			
SILURIAN: DECEW	244.4		
ROCHESTER	262.4		
IRONDEQUOIT	272.5		
REYNALES/FOSSIL HILL	274.8		
THOROLD	279.2		
GRIMSBY	281.5		
CABOT HEAD	297.7		
MANITOULIN			
WHIRLPOOL	312.0		
ORDOVICIAN: QUEENSTON	318.8		
BLUE MOUNTAIN - GEORG BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Haldimand TWP Lake Erie BLK 38 TRAC D-2 LOT CON

WELL NAME Pembina Lake Erie 38-D-2 PERMIT 7340 INIT CLASS NPW

OPERATOR Pembina Exploration Ltd TARGET CLI CUR STATUS GS-ABD

DRILLING DATA

CONTRACTOR Pembina Resources Ltd
RIG TYPE Rotary DEPTHS
CABLE TOOL KB ELEV 180.4
BOT LOGGER 376.8
ROTRY TOP 22.2 DRILLER 377.0
BOT 377.0 DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-07-11
SPUD 1988-07-21
COMPTD 1988-07-24
OFFCNF 1989-07-24
WRKOVR
ABNDND 1988-07-26

COORDINATES

NORTH m
SOUTH m
EAST m
WEST m
LAT 42 44 40.5
LONG 79 28 46.3

SAMPLES

TOP 93.0
BOT 375.0
TRAY 7891

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
305.0 –	Show	NA
346.0 – 350.0	Show	NA
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244	53.6	91.6	CEM	0
178	25.3	125.3	CEM	0

COMPLETION DATA

GAS $10^3 m^3/d$
OIL m^3/d
SIP 4354 kPa
FORM
INTRVL m
m
m
PERF ☐ OPEN HOLE ☐

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
19.9 – 376.2	GRNL	CMPL
19.9 – 376.2	DENL	"
124.6 – 375.9	DIL	"
25.0 – 375.0	CMPL	"
–		
–		
–		

REMARKS

DST #1 - 340.0-355.0

* Operator pick

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	ANAL
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / LAKE LEVEL	6.0		
DRIFT / LAKE BOTTOM	22.2		
DEVONIAN: PORT LAMBTON			
KETTLE POINT			
HAMILTON			
MARCELLUS			
DUNDEE			
COLUMBUS			
LUCAS			
AMHERSTBURG	71.3		
SYLVANIA			
BOIS BLANC	* 76.5		
SPRINGVALE			
ORISKANY			
SILURIAN: BASS ISLANDS	103.0		
G SHALE	110.2		
F SHALE	116.8		
F SALT			
E CARBONATE	151.8		
D SALT/EQUIVALENT			
C SHALE	173.7		
B MARKER	182.8		
B EQUIVALENT	188.8		
B SALT			
B ANHYDRITE	197.9		
A2 CARBONATE	201.8		
A2 SALT			
A2 ANHYDRITE			
A1 CARBONATE	210.2		
A1 SALT			
A1 ANHYDRITE			
GUELPH	213.2		
ERAMOSA			
GOAT ISLAND			
GASPORT/WIARTON			
SILURIAN: DECEW	271.4		
ROCHESTER	292.4		
IRONDEQUOIT	304.7		
REYNALES/FOSSIL HILL	306.7		
THOROLD	311.2		
GRIMSBY	313.2		
CABOT HEAD	334.0		
MANITOULIN			
WHIRLPOOL	346.4		
ORDOVICIAN: QUEENSTON	349.9		
BLUE MOUNTAIN - GEORG BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

T.R. Carter

CTY Haldimand TWP Lake Erie BLK 40 TRAC C-3 LOT CON
WELL NAME Pembina Lake Erie 40-G-3 PERMIT 7275 INIT CLASS DEV
OPERATOR Pembina Exploration Ltd TARGET CLI CUR STATUS GP

DRILLING DATA

CONTRACTOR Pembina Resources Ltd
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 180.4
BOT LOGGER 370.0
ROTRY TOP 36.4 DRILLER 370.0
BOT 370.0 DEEP END
DRLG FLD PLUG BK 355.2

DATES

PERMIT 1988-05-05
SPUD 1988-05-12
COMPTD 1988-05-16
OFFCNF
WRKOVR
ABNDND

COORDINATES

NORTH m
SOUTH m
EAST m
WEST m
LAT 42 43 05.9
LONG 79 38 51.6

SAMPLES

TOP 95.0
BOT 369.0
TRAY 8162

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
307.0 –	Show	NA
316.5 –	Show	NA
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244	54.7	91.7	CEM	0
178	23.5	127.0	CEM	0
114	14.1	366.9	CEM	0
60	7.0	315.2	HAN	0

COMPLETION DATA

GAS 3.2 $10^3m^3/d$
OIL m^3/d
SIP NA kPa
FORM Grimsby
INTRVL 316.0-317.0 m
320.2-321.5 m
m
PERF ☒ OPEN HOLE ☐

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
35.0 – 368.7	GRNL	CMPL
35.0 – 368.7	DENL	"
125.0 – 368.7	DIL	"
209.8 – 369.0	MLAT	"
35.0 – 368.7	LASL	"
250.0 – 351.5	CMPL	"
209.8 – 366.6	MEL	"

REMARKS

DST #1 - 314.0-324.0

* Operator pick

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
229.0 –	NA	SUL
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	ANAL
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / LAKE LEVEL	6.0		
DRIFT / LAKE BOTTOM	36.4		
DEVONIAN: PORT LAMBTON			
DEVONIAN: KETTLE POINT			
DEVONIAN: HAMILTON			
DEVONIAN: MARCELLUS			
DEVONIAN: DUNDEE			
DEVONIAN: COLUMBUS			
DEVONIAN: LUCAS			
DEVONIAN: AMHERSTBURG	80.0		
DEVONIAN: SYLVANIA			
DEVONIAN: BOIS BLANC	* 84.5		
DEVONIAN: SPRINGVALE			
DEVONIAN: ORISKANY			
SILURIAN: BASS ISLANDS	98.0		
SILURIAN: G SHALE	108.9		
SILURIAN: F SHALE	113.3		
SILURIAN: F SALT			
SILURIAN: E CARBONATE	152.0		
SILURIAN: D SALT/EQUIVALENT			
SILURIAN: C SHALE	175.3		
SILURIAN: B MARKER	183.1		
SILURIAN: B EQUIVALENT	189.3		
SILURIAN: B SALT			
SILURIAN: B ANHYDRITE	198.5		
SILURIAN: A2 CARBONATE	202.7		
SILURIAN: A2 SALT			
SILURIAN: A2 ANHYDRITE			
SILURIAN: A1 CARBONATE	213.0		
SILURIAN: A1 SALT			
SILURIAN: A1 ANHYDRITE			
SILURIAN: GUELPH	217.7		
SILURIAN: ERAMOSA			
SILURIAN: GOAT ISLAND			
SILURIAN: GASPORT/WIARTON			
SILURIAN: DECEW	274.0		
SILURIAN: ROCHESTER	294.1		
SILURIAN: IRONDEQUOIT	305.2		
SILURIAN: REYNALES/FOSSIL HILL	307.2		
SILURIAN: THOROLD	310.9		
SILURIAN: GRIMSBY	313.0		
SILURIAN: CABOT HEAD	329.7		
SILURIAN: MANITOULIN			
ORDOVICIAN: WHIRLPOOL	347.9		
ORDOVICIAN: QUEENSTON	350.8		
ORDOVICIAN: BLUE MOUNTAIN - GEORG BAY			
ORDOVICIAN: COLLINGWOOD			
ORDOVICIAN: COBOURG			
ORDOVICIAN: VERULAM			
ORDOVICIAN: KIRKFIELD			
ORDOVICIAN: COBOCONK			
ORDOVICIAN: GULL RIVER			
ORDOVICIAN: SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Haldimand TWP Lake Erie BLK 40 TRAC V-1 LOT CON
WELL NAME Pembina Lake Erie 40-V-1 PERMIT 7287 INIT CLASS DEV
OPERATOR Pembina Exploration Ltd TARGET CLI CUR STATUS GP

DRILLING DATA

CONTRACTOR Pembina Resources Ltd
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 180.4
BOT LOGGER 398.3
ROTRY TOP 36.0 DRILLER 398.0
BOT 398.0 DEEP END
DRLG FLD PLUG BK 392.4

DATES

PERMIT 1988-05-05
SPUD 1988-06-03
COMPTD 1988-06-06
OFFCNF 1988-07-06
WRKOVR
ABNDND

COORDINATES

NORTH m
SOUTH m
EAST m
WEST m
LAT 42 40 48.9
LONG 79 36 06.9

SAMPLES

TOP 100.0
BOT 398.0
TRAY 6865

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
343.0 –	Show	NA
346.5 – 347.7	Show	NA
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244	53.6	97.0	CEM	0
178	25.3	137.7	CEM	0
114	14.1	395.1	CEM	0
60	7.0	373.6	HAN	0

COMPLETION DATA

GAS 12.6 $10^3m^3/d$
OIL m^3/d
SIP NA kPa
FORM Grimsby,Whirlpool
INTRVL 346.5-348.5 m
352.8-353.5 m
375.5-379.5 m
PERF ☒ OPEN HOLE ☐

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
28.2 – 397.4	GRNL	CMPL
28.2 – 397.4	DENL	"
137.6 – 397.4	DIL	"
28.2 – 397.4	LASL	"
330.0 – 361.0	CMPL	"

REMARKS

* Operator pick

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
160.0 – 190.0	NA	SUL
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	ANAL
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / LAKE LEVEL	6.0		
DRIFT / LAKE BOTTOM	36.0		
DEVONIAN: PORT LAMBTON			
DEVONIAN: KETTLE POINT			
DEVONIAN: HAMILTON			
DEVONIAN: MARCELLUS			
DEVONIAN: DUNDEE			
DEVONIAN: COLUMBUS			
DEVONIAN: LUCAS			
DEVONIAN: AMHERSTBURG	80.0		
DEVONIAN: SYLVANIA			
DEVONIAN: BOIS BLANC	* 88.3		
DEVONIAN: SPRINGVALE			
DEVONIAN: ORISKANY			
SILURIAN: BASS ISLANDS	125.0		
SILURIAN: G SHALE	137.0		
SILURIAN: F SHALE	143.0		
SILURIAN: F SALT			
SILURIAN: E CARBONATE	178.2		
SILURIAN: D SALT/EQUIVALENT			
SILURIAN: C SHALE	200.7		
SILURIAN: B MARKER	209.6		
SILURIAN: B EQUIVALENT	215.7		
SILURIAN: B SALT			
SILURIAN: B ANHYDRITE	224.7		
SILURIAN: A2 CARBONATE	228.9		
SILURIAN: A2 SALT			
SILURIAN: A2 ANHYDRITE			
SILURIAN: A1 CARBONATE	238.2		
SILURIAN: A1 SALT			
SILURIAN: A1 ANHYDRITE			
SILURIAN: GUELPH	241.6		
SILURIAN: ERAMOSA			
SILURIAN: GOAT ISLAND			
SILURIAN: GASPORT/WIARTON			
SILURIAN: DECEW	299.1		
SILURIAN: ROCHESTER	319.9		
SILURIAN: IRONDEQUOIT	331.3		
SILURIAN: REYNALES/FOSSIL HILL	333.9		
SILURIAN: THOROLD	338.0		
SILURIAN: GRIMSBY	339.9		
SILURIAN: CABOT HEAD	358.3		
SILURIAN: MANITOULIN			
ORDOVICIAN: WHIRLPOOL	375.3		
ORDOVICIAN: QUEENSTON	381.1		
ORDOVICIAN: BLUE MOUNTAIN - GEORG BAY			
ORDOVICIAN: COLLINGWOOD			
ORDOVICIAN: COBOURG			
ORDOVICIAN: VERULAM			
ORDOVICIAN: KIRKFIELD			
ORDOVICIAN: COBOCONK			
ORDOVICIAN: GULL RIVER			
ORDOVICIAN: SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Haldimand TWP Lake Erie BLK 41 TRAC 1-2 LOT CON

WELL NAME Pembina Lake Erie 41-1-2 PERMIT 7277 INIT CLASS DEV

OPERATOR Pembina Exploration Ltd TARGET CLI CUR STATUS GP

DRILLING DATA

CONTRACTOR Pembina Resources Ltd

RIG TYPE Rotary DEPTHS

CABLE TOP KB ELEV 180.3

BOT LOGGER 359.0

ROTRY TOP 35.6 DRILLER 360.0

BOT 360.0 DEEP END

DRLG FLD PLUG BK 342.3

DATES

PERMIT 1988-05-05

SPUD 1988-05-18

COMPTD 1988-05-22

OFFCNF 1988-06-21

WRKOVR

ABNDND

COORDINATES

NORTH m

SOUTH m

EAST m

WEST m

LAT 42 43 45.8

LONG 79 41 47.7

SAMPLES

TOP 84.0

BOT 360.0

TRAY 6789

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
295.0 –	Show	NA
305.0 – 308.0	Show	NA
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244	53.6	83.5	CEM	0
178	25.3	110.7	CEM	0
114	14.1	353.0	CEM	0
60	7.0	298.8	HAN	0

COMPLETION DATA

GAS 8.0 $10^3 m^3/d$

OIL m^3/d

SIP NA kPa

FORM Grimsby

INTRVL 302.0-303.3 m

304.5-306.5 m

m

PERF X OPEN HOLE ☐

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
31.7 – 358.4	GRNL	CMPL
31.7 – 358.4	DENL	"
113.0 – 358.1	DIL	"
119.6 – 358.7	MLAT	"
31.7 – 358.7	LASL	"
119.6 – 356.6	MEL	"
288.0 – 341.0	CCL	"

REMARKS

DST #1 - 300.0-310.0

* Operator pick

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
240.0 – 270.0	NA	SUL
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / LAKE LEVEL	5.9		
DRIFT / LAKE BOTTOM	35.6		
DEVONIAN: PORT LAMBTON			
KETTLE POINT			
HAMILTON			
MARCELLUS			
DUNDEE			
COLUMBUS			
LUCAS			
AMHERSTBURG	69.0		
SYLVANIA			
BOIS BLANC	* 76.5		
SPRINGVALE			
ORISKANY			
SILURIAN: BASS ISLANDS	92.7		
G SHALE	101.3		
F SHALE	105.4		
F SALT			
E CARBONATE	142.6		
D SALT/EQUIVALENT			
C SHALE	165.1		
B MARKER	173.3		
B EQUIVALENT	179.0		
B SALT			
B ANHYDRITE	187.0		
A2 CARBONATE	192.1		
A2 SALT			
A2 ANHYDRITE			
A1 CARBONATE	203.0		
A1 SALT			
A1 ANHYDRITE			
GUELPH	207.4		
ERAMOSA			
GOAT ISLAND			
GASPORT/WIARTON			
DECEW	264.8		
ROCHESTER	285.2		
IRONDEQUOIT	295.8		
REYNALES/FOSSIL HILL	297.8		
THOROLD	301.0		
GRIMSBY	303.6		
CABOT HEAD	317.8		
MANITOULIN			
WHIRLPOOL	338.0		
ORDOVICIAN: QUEENSTON	340.2		
BLUE MOUNTAIN - GEORG BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Haldimand TWP Lake Erie BLK 41 TRAC K-1 LOT CON

WELL NAME Pembina Lake Erie 41-K-1 PERMIT 7278 INIT CLASS DEV

OPERATOR Pembina Exploration Ltd TARGET CUR STATUS GS-ABD

DRILLING DATA

CONTRACTOR Pembina Drilling Co. Ltd

RIG TYPE Rotary DEPTHS

CABLE TOP KB ELEV 180.5

BOT LOGGER 371.5

ROTRY TOP 37.3 DRILLER 372.0

BOT 372.0 DEEP END

DRLG FLD PLUG BK

DATES

PERMIT 1988-05-05

SPUD 1988-05-28

COMPTD 1988-05-31

OFFCNF 1988-06-30

WRKOVR

ABNDND 1988-06-03

COORDINATES

NORTH m

SOUTH m

EAST m

WEST m

LAT 42 42 46.2

LONG 79 40 18.7

SAMPLES

TOP 99.0

BOT 371.0

TRAY 7832

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
315.0 – 325.0	0.4	4835
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244	58.4	96.3	CEM	0
178	25.3	129.1	CEM	0

COMPLETION DATA

GAS $10^3 m^3/d$

OIL m^3/d

SIP kPa

FORM

INTRVL m

m

m

PERF ☐ OPEN HOLE ☐

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
32.6 – 370.9	GRNL	CMPL
32.6 – 370.9	DENL	"
129.0 – 370.3	DIL	"
135.1 – 370.5	MLAT	"
25.0 – 360.0	LASL	"
135.1 – 368.3	MICL	"
–		

REMARKS

DST #1 - 315.0-325.0

* Operator picks Discrepancies between log and sample tops.

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
289.0 –	NA	SUL
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / LAKE LEVEL	6.1		
DRIFT / LAKE BOTTOM	37.3		
DEVONIAN: PORT LAMBTON			
KETTLE POINT			
HAMILTON			
MARCELLUS			
DUNDEE			
COLUMBUS			
LUCAS			
AMHERSTBURG	78.0		
SYLVANIA			
BOIS BLANC	* 85.5		
SPRINGVALE			
ORISKANY			
SILURIAN: BASS ISLANDS	* 93.3		
G SHALE	110.8		
F SHALE	116.8		
F SALT			
E CARBONATE	148.1		
D SALT/EQUIVALENT			
C SHALE	171.1		
B MARKER	179.2		
B EQUIVALENT	185.2		
B SALT			
B ANHYDRITE	193.3		
A2 CARBONATE	198.0		
A2 SALT			
A2 ANHYDRITE			
A1 CARBONATE	208.1		
A1 SALT			
A1 ANHYDRITE			
GUELPH	212.8		
ERAMOSA			
GOAT ISLAND			
GASPORT/WIARTON			
DECEW	268.8		
ROCHESTER	290.2		
IRONDEQUOIT	300.6		
REYNALES/FOSSIL HILL	303.0		
THOROLD	305.3		
GRIMSBY	306.4		
CABOT HEAD	327.0		
MANITOULIN			
WHIRLPOOL	342.9		
ORDOVICIAN: QUEENSTON	345.3		
BLUE MOUNTAIN - GEORG BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Haldimand TWP Lake Erie BLK 41 TRAC T-1 LOT CON

WELL NAME Pembina Lake Erie 41-T-1 PERMIT 7279 INIT CLASS DEV

OPERATOR Pembina Exploration Ltd TARGET CLI CUR STATUS GP

DRILLING DATA			DATES		COORDINATES		SAMPLES	
CONTRACTOR	Pembina Resources Ltd		PERMIT	1988-05-05	NORTH	m	TOP	108.0
RIG TYPE	Rotary	DEPTHS	SPUD	1988-05-23	SOUTH	m	BOT	385.0
CABLE TOP		KB ELEV 180.5	COMPTD	1988-05-27	EAST	m	TRAY	7902
BOT		LOGGER 384.2	OFFCNF	1988-06-26	WEST	m		
ROTRY TOP	38.1	DRILLER 385.0	WRKOVR		LAT	42 41 48.3		
BOT	385.0	DEEP END	ABNDND		LONG	79 40 16.5		
DRLG FLD		PLUG BK 371.8						

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
330.0 –	Show	NA
362.0 –	Show	NA
–		
–		
–		
–		

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244	53.5	105.2	CEM	0
178	25.3	137.3	CEM	0
114	14.1	378.0	CEM	0
60	7.0	356.3	HAN	0

LOGGING RECORD

INTERVAL	TYPE	COMPANY
34.0 – 383.6	GRNL	CMPL
34.0 – 383.6	DENL	"
137.2 – 383.3	DIL	"
142.0 – 383.4	MLAT	"
34.0 – 383.6	LASL	"
324.0 – 372.0	CMPL	"
142.0 – 380.7	MEL	"

CORING RECORD

INTERVAL	LOCATION	NO	ANAL
–			
–			
–			
–			
–			

COMPLETION DATA

GAS	3.1	$10^3 m^3/d$
OIL		m^3/d
SIP	NA	kPa
FORM	Whirlpool	
INTRVL	359.3-360.1	m
	360.9-362.3	m
		m

PERF ☒ OPEN HOLE ☐

REMARKS

DST #1 - 356.0-366.0

* Operator picks

GEOLOGICAL CONTACTS		TOP	ELEV	THICK
	KB / LAKE LEVEL	6.0		
	DRIFT / LAKE BOTTOM	38.1		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON			
	MARCELLUS			
	DUNDEE			
	COLUMBUS			
	LUCAS			
	AMHERSTBURG	90.0		
	SYLVANIA			
	BOIS BLANC	* 94.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	*105.3		
	G SHALE	120.2		
	F SHALE	125.9		
	F SALT			
	E CARBONATE	163.8		
	D SALT/EQUIVALENT			
	C SHALE	187.0		
	B MARKER	195.3		
	B EQUIVALENT	201.1		
	B SALT			
	B ANHYDRITE	209.7		
	A2 CARBONATE	213.8		
	A2 SALT			

SILURIAN	A2 ANHYDRITE			
	A1 CARBONATE	223.9		
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH	228.3		
	ERAMOSA			
	GOAT ISLAND			
	GASPORT/WIARTON			
	DECEW	285.3		
	ROCHESTER	306.7		
	IRONDEQUOIT	317.0		
	REYNALES/FOSSIL HILL	319.1		
	THOROLD	322.7		
	GRIMSBY	323.6		
	CABOT HEAD	339.2		
	MANITOULIN			
	WHIRLPOOL	358.9		
ORDOVICIAN	QUEENSTON	362.9		
	BLUE MOUNTAIN - GEORG BAY			
	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
	CAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Haldimand TWP Lake Erie BLK 42 TRAC C-3 LOT CON

WELL NAME Pembina Lake Erie 42-C-3 PERMIT 7372 INIT CLASS DEV

OPERATOR Pembina Exploration Ltd TARGET CLI CUR STATUS GP-ABD

DRILLING DATA			DATES		COORDINATES		SAMPLES	
CONTRACTOR	Pembina Resources Ltd		PERMIT	1988-08-11	NORTH	m	TOP	75.0
RIG TYPE	Rotary	DEPTHS	SPUD	1988-09-07	SOUTH	m	BOT	361.0
CABLE TOP		KB ELEV 180.4	COMPTD	1988-09-11	EAST	m	TRAY	5439
BOT		LOGGER 361.3	OFFCNF	1988-10-11	WEST	m		
ROTRY TOP	33.5	DRILLER 361.6	WRKOVR		LAT	42 44 14.7		
BOT	361.6	DEEP END	ABNDND	1989-11-17	LONG	79 47 45.1		
DRLG FLD		PLUG BK 348.2						

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
297.6 – 300.2	Show	NA
333.3 – 335.1	Show	NA
–		
–		
–		
–		

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244	53.6	72.3	CEM	0
178	25.3	113.9	CEM	0
114	14.1	359.0	CEM	0
60	7.0	329.9	HAN	329.9

LOGGING RECORD

INTERVAL	TYPE	COMPANY
31.3 – 360.7	GRNL	CMPL
31.3 – 360.7	DENL	"
31.3 – 360.7	LASL	"
114.0 – 360.4	DIL	"
290.0 – 348.0	CMPL	"
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	ANAL
–			
–			
–			
–			
–			

COMPLETION DATA

GAS	18.1	$10^3 m^3/d$
OIL		m^3/d
SIP	NA	kPa
FORM	Whirlpool	
INTRVL	333.1-333.8	m
	334.3-335.2	m
		m

PERF ☒ OPEN HOLE ☐

REMARKS

* Operator pick

GEOLOGICAL CONTACTS		TOP	ELEV	THICK
	KB / LAKE LEVEL	6.0		
	DRIFT / LAKE BOTTOM	33.5		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON			
	MARCELLUS			
	DUNDEE			
	COLUMBUS			
	LUCAS			
	AMHERSTBURG	55.1		
	SYLVANIA			
	BOIS BLANC	* 59.1		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	86.9		
	G SHALE	95.3		
	F SHALE	99.6		
	F SALT			
	E CARBONATE	135.6		
	D SALT/EQUIVALENT			
	C SHALE	157.9		
	B MARKER	167.0		
	B EQUIVALENT	172.8		
	B SALT			
	B ANHYDRITE	180.9		
	A2 CARBONATE	185.5		
	A2 SALT			

SILURIAN	A2 ANHYDRITE			
	A1 CARBONATE	197.0		
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH	203.1		
	ERAMOSA			
	GOAT ISLAND			
	GASPORT/WIARTON			
	DECEW	255.2		
	ROCHESTER	282.0		
	IRONDEQUOIT	290.2		
	REYNALES/FOSSIL HILL	292.2		
	THOROLD	295.1		
	GRIMSBY	298.4		
	CABOT HEAD	312.4		
	MANITOULIN			
	WHIRLPOOL	332.0		
ORDOVICIAN	QUEENSTON	336.6		
	BLUE MOUNTAIN - GEORG BAY			
	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
	CAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY	Haldimand	TWP	Lake Erie		BLK	42	TRAC	M-2	LOT		CON
WELL NAME	Pembina Lake Erie 42-M-2				PERMIT	7280			INIT CLASS	DEV	
OPERATOR	Pembina Exploration Ltd				TARGET	CLI			CUR STATUS	GS-ABD	

DRILLING DATA				DATES		COORDINATES		SAMPLES	
CONTRACTOR	Pembina Resources Ltd			PERMIT	1988-05-05	NORTH	m	TOP	78.0
RIG TYPE	Rotary	DEPTHS		SPUD	1988-06-10	SOUTH	m	BOT	375.0
CABLE TOP		KB ELEV	180.5	COMPTD	1988-06-13	EAST	m	TRAY	6818
BOT		LOGGER	375.2	OFFCNF	1988-07-13	WEST	m		
ROTRY TOP	32.0	DRILLER	375.0	WRKOVR		LAT	42 42 44.8		
BOT	375.0	DEEP END		ABNDND	1988-07-13	LONG	79-47-48.1		
DRLG FLD		PLUG BK							

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS	$10^3 m^3/d$
311.2 – 311.8	Show	NA	244	53.6	76.6	CEM	0	OIL	m^3/d
–			178	25.3	121.7	CEM	0	SIP	kPa
–								FORM	
–								INTRVL	m
–									m
–									m

INITIAL OIL RECORD			LOGGING RECORD			PERF ☐ OPEN HOLE ☐
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	REMARKS
–			28.2 – 374.6	GRNL	CMPL	
–			28.2 – 374.6	DENL	"	* Operator pick
–			121.7 – 374.3	DIL	"	Some discrepancies
–			25.0 – 375.0	LASL	"	between samples & logs
–			–			
–			–			

INITIAL WATER RECORD			CORING RECORD			
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	MIN
–			–			
–			–			
–			–			
–			–			
–			–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / LAKE LEVEL	6.0		
	DRIFT / LAKE BOTTOM	32.0		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON			
	MARCELLUS			
	DUNDEE			
	COLUMBUS			
	LUCAS			
	AMHERSTBURG	65.0		
	SYLVANIA			
	BOIS BLANC	* 75.5		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	95.3		
	G SHALE	108.3		
	F SHALE	113.1		
	F SALT			
	E CARBONATE	150.2		
	D SALT/EQUIVALENT			
	C SHALE	172.6		
	B MARKER	181.6		
	B EQUIVALENT	187.6		
	B SALT			
	B ANHYDRITE	196.3		
	A2 CARBONATE	200.3		
	A2 SALT			

	A2 ANHYDRITE			
	A1 CARBONATE	211.8		
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH	217.4		
	ERAMOSA			
	GOAT ISLAND			
SILURIAN	GASPORT/WIARTON			
	DECEW	273.8		
	ROCHESTER	296.9		
	IRONDEQUOIT	305.3		
	REYNALES/FOSSIL HILL	307.1		
	THOROLD	309.6		
	GRIMSBY	312.0		
	CABOT HEAD	323.8		
	MANITOULIN			
	WHIRLPOOL	346.9		
	QUEENSTON	350.3		
	BLUE MOUNTAIN - GEORG. BAY			
	COLLINGWOOD			
ORDOVICIAN	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
	CAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY	Haldimand	TWP	Lake Erie		BLK	42	TRAC	W-2	LOT		CON
WELL NAME	Pembina Lake Erie 42-W-2				PERMIT	7281			INIT CLASS	DEV	
OPERATOR	Pembina Explorations Ltd				TARGET	CLI			CUR STATUS	GP	

DRILLING DATA				DATES		COORDINATES		SAMPLES	
CONTRACTOR	Pembina Resources Ltd			PERMIT	1988-05-05	NORTH	m	TOP	95.0
RIG TYPE	Rotary	DEPTHS		SPUD	1988-06-13	SOUTH	m	BOT	395.0
CABLE TOP		KB ELEV	180.4	COMPTD	1988-06-17	EAST	m	TRAY	6849
BOT		LOGGER	395.0	OFFCNF	1988-07-17	WEST	m		
ROTRY TOP	41.7	DRILLER	395.0	WRKOVR		LAT	42 40 43.8		
BOT	395.0	DEEP END		ABNDND		LONG	79 47 46.6		
DRLG FLD		PLUG BK	380.6						

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS 17.8	$10^3 m^3/d$
329.7 – 330.0	Show	NA	244	53.6	89.9	CEM	0	OIL	m^3/d
338.8 – 340.0	Show	NA	178	25.3	146.3	CEM	0	SIP 4661	kPa
340.2 – 341.3	Show	NA	114	14.1	390.3	CEM	0	FORM Grimsby	
–			60	7.0	326.1	HAN	0	INTRVL 329.6-330.4	m
–								340.1-341.5	m
–									m

INITIAL OIL RECORD			LOGGING RECORD			PERF ☒ OPEN HOLE ☐
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	REMARKS
–			38.7 – 394.6	GRNL	CMPL	
–			38.7 – 394.6	DENL	"	DST #1 - 336.0-345.0
–			145.3 – 394.1	DIL	"	
–			38.7 – 394.6	LASL	"	* Operator pick
–			300.0 – 387.0	CMPL	"	
–			–			

INITIAL WATER RECORD			CORING RECORD			
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	MIN
–			–			
–			–			
–			–			
–			–			
–			–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / LAKE LEVEL	6.0		
	DRIFT / LAKE BOTTOM	41.7		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON			
	MARCELLUS			
	DUNDEE			
	COLUMBUS			
	LUCAS			
	AMHERSTBURG	78.0		
	SYLVANIA			
	BOIS BLANC	* 89.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	113.5		
	G SHALE	128.1		
	F SHALE	133.0		
	F SALT			
	E CARBONATE	169.4		
	D SALT/EQUIVALENT			
	C SHALE	192.0		
	B MARKER	200.1		
	B EQUIVALENT	206.3		
	B SALT			
	B ANHYDRITE	213.9		
	A2 CARBONATE	218.9		
	A2 SALT			

	A2 ANHYDRITE			
	A1 CARBONATE	230.1		
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH	234.9		
	ERAMOSA			
	GOAT ISLAND			
SILURIAN	GASPORT/WIARTON			
	DECEW	290.9		
	ROCHESTER	310.6		
	IRONDEQUOIT	322.1		
	REYNALES/FOSSIL HILL	324.1		
	THOROLD	326.6		
	GRIMSBY	328.9		
	CABOT HEAD	343.4		
	MANITOULIN			
	WHIRLPOOL	365.1		
	QUEENSTON	369.3		
	BLUE MOUNTAIN - GEORG. BAY			
	COLLINGWOOD			
ORDOVICIAN	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
	CAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

T.R. Carter

CTY	Haldimand	TWP	Lake Erie	BLK	43	TRAC	U-2	LOT		CON	
WELL NAME	Pembina Lake Erie 43-U-2			PERMIT	7346	INIT CLASS	DEV				
OPERATOR	Pembina Exploration Ltd			TARGET	CLI	CUR STATUS	DH-ABD				

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	Pembina Resources Ltd			PERMIT	1988-07-11	NORTH	m	TOP	91.0	
RIG TYPE	Rotary	DEPTHS		SPUD	1988-07-26	SOUTH	m	BOT	395.0	
CABLE TOP		KB ELEV	180.3	COMPTD	1988-07-30	EAST	m	TRAY	8463	
BOT		LOGGER	396.0	OFFCNF	1988-08-29	WEST	m			
ROTRY TOP	40.6	DRILLER	398.0	WRKOVR		LAT	42 40 43.7			
BOT	398.0	DEEP END		ABNDND	1988-07-30	LONG	79 50 44.5			
DRLG FLD		PLUG BK								

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS	$10^3 m^3/d$
–			244	53.6	88.8	CEM	0	OIL	m^3/d
–			178	25.3	150.5	CEM	0	SIP	kPa
–								FORM	
–								INTRVL	m
–									m
–									m

INITIAL OIL RECORD			LOGGING RECORD				
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	PERF ☐	OPEN HOLE ☐
–			38.5 – 395.4	GRNL	CMPL	REMARKS	
–			38.5 – 395.4	DENL	"	* Operator pick	
–			150.6 – 395.1	DIL	"		
–			–				
–			–				
–			–				

INITIAL WATER RECORD			CORING RECORD			
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	MM
–			–			
–			–			
–			–			
–			–			
–			–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / LAKE LEVEL	5.9		
	DRIFT / LAKE BOTTOM	40.6		
DEVONIAN	PORT LAMBTON			
DEVONIAN	KETTLE POINT			
DEVONIAN	HAMILTON			
DEVONIAN	MARCELLUS			
DEVONIAN	DUNDEE			
DEVONIAN	COLUMBUS			
DEVONIAN	LUCAS			
DEVONIAN	AMHERSTBURG	75.6		
DEVONIAN	SYLVANIA			
DEVONIAN	BOIS BLANC	* 84.3		
DEVONIAN	SPRINGVALE			
DEVONIAN	ORISKANY			
SILURIAN	BASS ISLANDS	116.5		
SILURIAN	G SHALE	131.8		
SILURIAN	F SHALE	136.8		
SILURIAN	F SALT			
SILURIAN	E CARBONATE	172.9		
SILURIAN	D SALT/EQUIVALENT			
SILURIAN	C SHALE	195.9		
SILURIAN	B MARKER	203.7		
SILURIAN	B EQUIVALENT	214.5		
SILURIAN	B SALT			
SILURIAN	B ANHYDRITE	218.2		
SILURIAN	A2 CARBONATE	222.2		
SILURIAN	A2 SALT			
SILURIAN	A2 ANHYDRITE			
SILURIAN	A1 CARBONATE	233.4		
SILURIAN	A1 SALT			
SILURIAN	A1 ANHYDRITE			
SILURIAN	GUELPH	238.6		
SILURIAN	ERAMOSA			
SILURIAN	GOAT ISLAND			
SILURIAN	GASPORT/WIARTON			
SILURIAN	DECEW	297.0		
SILURIAN	ROCHESTER	310.6		
SILURIAN	IRONDEQUOIT	328.9		
SILURIAN	REYNALES/FOSSIL HILL	330.8		
SILURIAN	THOROLD	333.5		
SILURIAN	GRIMSBY	334.3		
SILURIAN	CABOT HEAD	356.9		
SILURIAN	MANITOULIN			
ORDOVICIAN	WHIRLPOOL	370.5		
ORDOVICIAN	QUEENSTON	374.0		
ORDOVICIAN	BLUE MOUNTAIN - GEORG. BAY			
ORDOVICIAN	COLLINGWOOD			
ORDOVICIAN	COBOURG			
ORDOVICIAN	VERULAM			
ORDOVICIAN	KIRKFIELD			
ORDOVICIAN	COBOCONK			
ORDOVICIAN	GULL RIVER			
ORDOVICIAN	SHADOW LAKE			
CAMBRIAN	CAMBRIAN			
PRECAMBRIAN	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY	Haldimand	TWP	Lake Erie	BLK	65	TRAC	F-4	LOT		CON	
WELL NAME	Pembina Lake Erie 65-F-4			PERMIT	7362	INIT CLASS	DEV				
OPERATOR	Pembina Exploration Ltd			TARGET	CLI	CUR STATUS	GP				

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	Pembina Resources Ltd			PERMIT	1988-07-29	NORTH	m	TOP	78.0	
RIG TYPE	Rotary	DEPTHS		SPUD	1988-08-01	SOUTH	m	BOT	419.0	
CABLE TOP		KB ELEV	180.3	COMPTD	1988-08-04	EAST	m	TRAY	7792	
BOT		LOGGER	419.2	OFFCNF	1988-09-03	WEST	m			
ROTRY TOP	39.7	DRILLER	419.2	WRKOVR		LAT	42 38 15.9			
BOT	419.2	DEEP END		ABNDND		LONG	80 04 16.2			
DRLG FLD		PLUG BK	406.2							

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS 31.1	$10^3 m^3/d$
360.0 – 361.0	Show	NA	244	53.6	74.6	CEM	0	OIL	m^3/d
–			178	25.3	142.1	CEM	0	SIP NA	kPa
–			114	14.1	416.2	CEM	0	FORM Grimsby	
–			60	7.0	358.1	HAN	0	INTRVL 361.0-362.1	m
–									m
–									m

INITIAL OIL RECORD			LOGGING RECORD				
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	PERF ☒	OPEN HOLE ☐
–			36.9 – 418.6	GRNL	CMPL	REMARKS	
–			36.9 – 418.6	DENL	"	DST #1 - 357.0-366.0	
–			141.7 – 418.3	DIL	"		
–			36.9 – 418.6	LASL	"		
–			345.0 – 404.0	CMPL	"		
–			–				
–			–				

INITIAL WATER RECORD			CORING RECORD			
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	MM
–			–			
–			–			
–			–			
–			–			
–			–			
–			–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / LAKE LEVEL	5.9		
	DRIFT / LAKE BOTTOM	39.7		
DEVONIAN	PORT LAMBTON			
DEVONIAN	KETTLE POINT			
DEVONIAN	HAMILTON			
DEVONIAN	MARCELLUS			
DEVONIAN	DUNDEE	63.7		
DEVONIAN	COLUMBUS			
DEVONIAN	LUCAS			
DEVONIAN	AMHERSTBURG			
DEVONIAN	SYLVANIA			
DEVONIAN	BOIS BLANC	92.5		
DEVONIAN	SPRINGVALE			
DEVONIAN	ORISKANY			
SILURIAN	BASS ISLANDS	110.6		
SILURIAN	G SHALE	134.9		
SILURIAN	F SHALE	139.9		
SILURIAN	F SALT			
SILURIAN	E CARBONATE	177.0		
SILURIAN	D SALT/EQUIVALENT			
SILURIAN	C SHALE	199.8		
SILURIAN	B MARKER	208.3		
SILURIAN	B EQUIVALENT	213.8		
SILURIAN	B SALT			
SILURIAN	B ANHYDRITE	220.8		
SILURIAN	A2 CARBONATE	225.6		
SILURIAN	A2 SALT			
SILURIAN	A2 ANHYDRITE			
SILURIAN	A1 CARBONATE	235.8		
SILURIAN	A1 SALT			
SILURIAN	A1 ANHYDRITE			
SILURIAN	GUELPH	238.6		
SILURIAN	ERAMOSA			
SILURIAN	GOAT ISLAND			
SILURIAN	GASPORT/WIARTON			
SILURIAN	DECEW	316.3		
SILURIAN	ROCHESTER	333.9		
SILURIAN	IRONDEQUOIT	349.3		
SILURIAN	REYNALES/FOSSIL HILL	351.3		
SILURIAN	THOROLD	353.0		
SILURIAN	GRIMSBY	354.0		
SILURIAN	CABOT HEAD	367.6		
SILURIAN	MANITOULIN			
ORDOVICIAN	WHIRLPOOL	391.8		
ORDOVICIAN	QUEENSTON	393.9		
ORDOVICIAN	BLUE MOUNTAIN - GEORG. BAY			
ORDOVICIAN	COLLINGWOOD			
ORDOVICIAN	COBOURG			
ORDOVICIAN	VERULAM			
ORDOVICIAN	KIRKFIELD			
ORDOVICIAN	COBOCONK			
ORDOVICIAN	GULL RIVER			
ORDOVICIAN	SHADOW LAKE			
CAMBRIAN	CAMBRIAN			
PRECAMBRIAN	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY: Haldimand TWP: Lake Erie BLK: 43 TRAC: U-2 LOT: CON:

WELL NAME: Pembina Lake Erie 43-U-2 PERMIT: 7346 INIT CLASS: DEV

OPERATOR: Pembina Exploration Ltd TARGET: CLI CUR STATUS: DH-ABD

DRILLING DATA

CONTRACTOR: Pembina Resources Ltd

RIG TYPE: Rotary DEPTHS

CABLE TOP: KB ELEV: 180.3

BOT: LOGGER: 396.0

ROTRY TOP: 40.6 DRILLER: 398.0

BOT: 398.0 DEEP END:

DRLG FLD: PLUG BK:

DATES

PERMIT: 1988-07-11

SPUD: 1988-07-26

COMPTD: 1988-07-30

OFFCNF: 1988-08-29

WRKOVR:

ABNDND: 1988-07-30

COORDINATES

NORTH: m

SOUTH: m

EAST: m

WEST: m

LAT: 42 40 43.7

LONG: 79 50 44.5

SAMPLES

TOP: 91.0

BOT: 395.0

TRAY: 8463

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244	53.6	88.8	CEM	0
178	25.3	150.5	CEM	0

COMPLETION DATA

GAS: $10^3 m^3/d$

OIL: m^3/d

SIP: kPa

FORM:

INTRVL: m

m

m

PERF ☐ OPEN HOLE ☐

REMARKS

* Operator pick

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
38.5 – 395.4	GRNL	CMPL
38.5 – 395.4	DENL	"
150.6 – 395.1	DIL	"
–		
–		
–		
–		

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	MM
–			
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / LAKE LEVEL	5.9		
DRIFT / LAKE BOTTOM	40.6		
PORT LAMBTON			
KETTLE POINT			
HAMILTON			
MARCELLUS			
DUNDEE			
COLUMBUS			
LUCAS			
AMHERSTBURG	75.6		
SYLVANIA			
BOIS BLANC	* 84.3		
SPRINGVALE			
ORISKANY			
BASS ISLANDS	116.5		
G SHALE	131.8		
F SHALE	136.8		
F SALT			
E CARBONATE	172.9		
D SALT/EQUIVALENT			
C SHALE	195.9		
B MARKER	203.7		
B EQUIVALENT	214.5		
B SALT			
B ANHYDRITE	218.2		
A2 CARBONATE	222.2		
A2 SALT			
A2 ANHYDRITE			
A1 CARBONATE	233.4		
A1 SALT			
A1 ANHYDRITE			
GUELPH	238.6		
ERAMOSA			
GOAT ISLAND			
GASPORT/WARTON			
DECEW	297.0		
ROCHESTER	310.6		
IRONDEQUOIT	328.9		
REYNALES/FOSSIL HILL	330.8		
THOROLD	333.5		
GRIMSBY	334.3		
CABOT HEAD	356.9		
MANITOULIN			
WHIRLPOOL	370.5		
QUEENSTON	374.0		
BLUE MOUNTAIN - GEORG BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY: Haldimand TWP: Lake Erie BLK: 65 TRAC: F-4 LOT: CON:

WELL NAME: Pembina Lake Erie 65-F-4 PERMIT: 7362 INIT CLASS: DEV

OPERATOR: Pembina Exploration Ltd TARGET: CLI CUR STATUS: GP

DRILLING DATA

CONTRACTOR: Pembina Resources Ltd

RIG TYPE: Rotary DEPTHS

CABLE TOP: KB ELEV: 180.3

BOT: LOGGER: 419.2

ROTRY TOP: 39.7 DRILLER: 419.2

BOT: 419.2 DEEP END:

DRLG FLD: PLUG BK: 406.2

DATES

PERMIT: 1988-07-29

SPUD: 1988-08-01

COMPTD: 1988-08-04

OFFCNF: 1988-09-03

WRKOVR:

ABNDND:

COORDINATES

NORTH: m

SOUTH: m

EAST: m

WEST: m

LAT: 42 38 15.9

LONG: 80 04 16.2

SAMPLES

TOP: 78.0

BOT: 419.0

TRAY: 7792

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
360.0 – 361.0	Show	NA
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244	53.6	74.6	CEM	0
178	25.3	142.1	CEM	0
114	14.1	416.2	CEM	0
60	7.0	358.1	HAN	0

COMPLETION DATA

GAS: 31.1 $10^3 m^3/d$

OIL: m^3/d

SIP: NA kPa

FORM: Grimsby

INTRVL: 361.0-362.1 m

m

m

PERF ☑ OPEN HOLE ☐

REMARKS

DST #1 - 357.0-366.0

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
36.9 – 418.6	GRNL	CMPL
36.9 – 418.6	DENL	"
141.7 – 418.3	DIL	"
36.9 – 418.6	LASL	"
345.0 – 404.0	CMPL	"
–		
–		

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	MM
–			
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / LAKE LEVEL	5.9		
DRIFT / LAKE BOTTOM	39.7		
PORT LAMBTON			
KETTLE POINT			
HAMILTON			
MARCELLUS			
DUNDEE	63.7		
COLUMBUS			
LUCAS			
AMHERSTBURG			
SYLVANIA			
BOIS BLANC	92.5		
SPRINGVALE			
ORISKANY			
BASS ISLANDS	110.6		
G SHALE	134.9		
F SHALE	139.9		
F SALT			
E CARBONATE	177.0		
D SALT/EQUIVALENT			
C SHALE	199.8		
B MARKER	208.3		
B EQUIVALENT	213.8		
B SALT			
B ANHYDRITE	220.8		
A2 CARBONATE	225.6		
A2 SALT			
A2 ANHYDRITE			
A1 CARBONATE	235.8		
A1 SALT			
A1 ANHYDRITE			
GUELPH	238.6		
ERAMOSA			
GOAT ISLAND			
GASPORT/WARTON			
DECEW	316.3		
ROCHESTER	333.9		
IRONDEQUOIT	349.3		
REYNALES/FOSSIL HILL	351.3		
THOROLD	353.0		
GRIMSBY	354.0		
CABOT HEAD	367.6		
MANITOULIN			
WHIRLPOOL	391.8		
QUEENSTON	393.9		
BLUE MOUNTAIN - GEORG BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

T.R. Carter

CTY Haldimand TWP Lake Erie BLK 70 TRAC I-3 LOT CON

WELL NAME Pembina Lake Erie 70-I-3 PERMIT 7282 INIT CLASS DEV

OPERATOR Pembina Exploration Ltd TARGET CLI CUR STATUS CP

DRILLING DATA

CONTRACTOR Pembina Resources Ltd
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 180.4
BOT LOGGER 440.2
ROTRY TOP 40.0 DRILLER 444.0
BOT 444.0 DEEP END
DRLG FLD PLUG BK 429.0

DATES

PERMIT 1988-05-05
SPUD 1988-06-18
COMPTD 1988-06-22
OFFCNF 1988-07-22
WRKOVR
ABNDND

COORDINATES

NORTH m
SOUTH m
EAST m
WEST m
LAT 42 38 20.4
LONG 79 36 45.7

SAMPLES

TOP 130.0
BOT 436.0
TRAY 5192

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
369.0 –	Show	NA
388.0 – 389.0	Show	NA
392.0 – 393.0	Show	NA
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244	53.9	126.6	CEM	0
178	25.3	187.9	CEM	0
114	14.1	437.2	CEM	0
60	7.0	388.5	HAN	0

COMPLETION DATA

GAS 29.6 10 m^3/d
OIL m^3/d
SIP NA kPa
FORM Grimsby
INTRVL 391.9-393.2 m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
35.0 – 439.6	GRNL	CMPL
35.0 – 439.6	DENL	"
35.0 – 439.6	LASL	"
186.7 – 439.3	DIL	"
370.0 – 418.5	CMPL	"
–		
–		

PERF ☒ OPEN HOLE ☐

REMARKS

DST #1 - 386.0-396.0

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	ANAL
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / LAKE LEVEL	6.0		
DRIFT / LAKE BOTTOM	40.0		
DEVONIAN: PORT LAMBTON			
KETTLE POINT			
HAMILTON			
MARCELLUS			
DUNDEE			
COLUMBUS			
LUCAS			
AMHERSTBURG	108.0		
SYLVANIA			
BOIS BLANC	138.5		
SPRINGVALE			
ORISKANY			
SILURIAN: BASS ISLANDS	161.7		
G SHALE	173.5		
F SHALE	178.0		
F SALT			
E CARBONATE	216.0		
D SALT/EQUIVALENT			
C SHALE	238.7		
B MARKER	247.6		
B EQUIVALENT	253.7		
B SALT			
B ANHYDRITE	262.0		
A2 CARBONATE	266.8		
A2 SALT			
A2 ANHYDRITE			
A1 CARBONATE	276.1		
A1 SALT			
A1 ANHYDRITE			
GUELPH	282.3		
ERAMOSA			
GOAT ISLAND			
GASPORT/WIARTON			
DECEW	348.9		
ROCHESTER	354.0		
IRONDEQUOIT	369.8		
REYNALES/FOSSIL HILL	372.0		
THOROLD			
GRIMSBY	376.0		
CABOT HEAD	396.0		
MANITOULIN			
WHIRLPOOL	414.1		
ORDOVICIAN: QUEENSTON	417.3		
BLUE MOUNTAIN - GEORG BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Haldimand TWP Lake Erie BLK 70 TRAC K-3 LOT CON

WELL NAME Pembina Lake Erie 70-K-3 PERMIT 7283 INIT CLASS DEV

OPERATOR Pembina Exploration Ltd TARGET CLI CUR STATUS CP

DRILLING DATA

CONTRACTOR Pembina Resources Ltd
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 180.4
BOT LOGGER 466.7
ROTRY TOP 48.0 DRILLER 466.9
BOT 466.9 DEEP END
DRLG FLD PLUG BK 453.5

DATES

PERMIT 1988-05-05
SPUD 1988-06-24
COMPTD 1988-06-28
OFFCNF 1988-07-28
WRKOVR
ABNDND

COORDINATES

NORTH m
SOUTH m
EAST m
WEST m
LAT 42 37 07.0
LONG 79 35 42.8

SAMPLES

TOP 104.0
BOT 465.0
TRAY 6398

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
401.5 – 402.5	Show	NA
414.0 – 414.6	Show	NA
437.8 – 438.6	Show	NA
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244	53.6	144.9	CEM	0
178	25.3	203.9	CEM	0
114	14.1	463.5	CEM	0
60	7.0	433.0	HAN	0

COMPLETION DATA

GAS 20.0 10 m^3/d
OIL m^3/d
SIP NA kPa
FORM Whirlpool
INTRVL 435.9-436.5 m
437.6-438.8 m
439.8-440.6 m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
38.3 – 466.1	GRNL	CMPL
38.3 – 466.1	DENL	"
203.5 – 465.8	DIL	"
38.3 – 466.1	LASL	"
400.0 – 451.8	CMPL	"
–		
–		

PERF ☒ OPEN HOLE ☐

REMARKS

DST #1 - 433.5-443.5

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	ANAL
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / LAKE LEVEL	6.0		
DRIFT / LAKE BOTTOM	48.0		
DEVONIAN: PORT LAMBTON			
KETTLE POINT			
HAMILTON			
MARCELLUS			
DUNDEE			
COLUMBUS			
LUCAS			
AMHERSTBURG	130.0		
SYLVANIA			
BOIS BLANC	161.0		
SPRINGVALE			
ORISKANY			
SILURIAN: BASS ISLANDS	179.5		
G SHALE	194.2		
F SHALE	198.5		
F SALT			
E CARBONATE	236.4		
D SALT/EQUIVALENT			
C SHALE	258.7		
B MARKER	268.0		
B EQUIVALENT	274.4		
B SALT			
B ANHYDRITE	282.6		
A2 CARBONATE	287.6		
A2 SALT			
A2 ANHYDRITE			
A1 CARBONATE	297.0		
A1 SALT			
A1 ANHYDRITE			
GUELPH	301.8		
ERAMOSA			
GOAT ISLAND			
GASPORT/WIARTON			
DECEW	370.0		
ROCHESTER	376.2		
IRONDEQUOIT	391.7		
REYNALES/FOSSIL HILL	393.5		
THOROLD			
GRIMSBY	397.1		
CABOT HEAD	415.8		
MANITOULIN			
WHIRLPOOL	435.5		
ORDOVICIAN: QUEENSTON	441.0		
BLUE MOUNTAIN - GEORG BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Haldimand TWP Lake Erie BLK 70 TRAC 0-4 LOT CON

WELL NAME Pembina Lake Erie 70-0-4 PERMIT 7373 INIT CLASS DEV

OPERATOR Pembina Exploration Ltd TARGET CLI CUR STATUS GP

DRILLING DATA

CONTRACTOR Pembina Resources Ltd

RIG TYPE Rotary DEPTHS

CABLE TOP KB ELEV 180.4

BOT LOGGER 457.8

ROTRY TOP 48.5 DRILLER 457.8

BOT 457.8 DEEP END

DRLG FLD PLUG BK 442.4

DATES

PERMIT 1988-08-11

SPUD 1988-09-01

COMPTD 1988-09-04

OFFCNF 1988-10-04

WRKOVR

ABNDND

COORDINATES

NORTH m

SOUTH m

EAST m

WEST m

LAT 42 37 14.2

LONG 79 39 17.6

SAMPLES

TOP 138.0

BOT 458.0

TRAY 5507

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
393.3 – 401.5	NA	NA
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244	53.6	136.2	CEM	0
178	25.3	199.3	CEM	0
114	14.1	452.8	CEM	0
60	7.0	395.4	HAN	0

COMPLETION DATA

GAS 19.0 $10^3m^3/d$

OIL m^3/d

SIP NA kPa

FORM Grimsby

INTRVL 398.3-399.2 m

399.9-400.6 m

m

PERF ☒ OPEN HOLE ☐

REMARKS

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
42.8 – 457.2	GRNL	CMPL
42.8 – 457.2	DENL	"
42.8 – 457.2	LASL	"
199.0 – 456.9	DIL	"
410.0 – 445.0	CMPL	"
–		
–		

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	ANAL
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / LAKE LEVEL	6.0		
DRIFT / LAKE BOTTOM	48.5		
PORT LAMBTON			
KETTLE POINT			
HAMILTON			
MARCELLUS			
DUNDEE			
COLUMBUS			
LUCAS			
AMHERSTBURG	118.0		
SYLVANIA			
BOIS BLANC	146.0		
SPRINGVALE			
ORISKANY			
BASS ISLANDS	168.3		
G SHALE	182.2		
F SHALE	188.2		
F SALT			
E CARBONATE	225.5		
D SALT/EQUIVALENT			
C SHALE	248.9		
B MARKER	259.0		
B EQUIVALENT	265.1		
B SALT			
B ANHYDRITE	273.6		
A2 CARBONATE	278.2		
A2 SALT			
A2 ANHYDRITE			
A1 CARBONATE	288.0		
A1 SALT			
A1 ANHYDRITE			
GUELPH	292.5		
ERAMOSA			
GOAT ISLAND			
GASPORT/MARTON			
DECEW	352.1		
ROCHESTER	363.9		
IRONDEQUOIT	382.0		
REYNALES/FOSSIL HILL	384.0		
THOROLD			
GRIMSBY	387.2		
CABOT HEAD	409.1		
MANITOULIN			
WHIRLPOOL	426.6		
QUEENSTON	429.1		
BLUE MOUNTAIN - GEORG. BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Haldimand TWP Lake Erie BLK 70 TRAC T-4 LOT CON

WELL NAME Pembina Lake Erie 70-T-4 PERMIT 7284 INIT CLASS DEV

OPERATOR Pembina Exploration Ltd TARGET CLI CUR STATUS GS-ABD

DRILLING DATA

CONTRACTOR Pembina Resources Ltd

RIG TYPE Rotary DEPTHS

CABLE TOP KB ELEV 180.4

BOT LOGGER 475.0

ROTRY TOP 52.4 DRILLER 475.0

BOT 475.0 DEEP END

DRLG FLD PLUG BK

DATES

PERMIT 1988-05-05

SPUD 1988-07-01

COMPTD 1988-07-05

OFFCNF 1988-08-04

WRKOVR

ABNDND 1988-07-05

COORDINATES

NORTH m

SOUTH m

EAST m

WEST m

LAT 42 36 13.7

LONG 79 35 16.0

SAMPLES

TOP 150.0

BOT 469.0

TRAY 6812

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
414.5 – 415.2	Show	NA
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244	53.6	149.2	CEM	0
178	25.3	213.9	CEM	0

COMPLETION DATA

GAS $10^3m^3/d$

OIL m^3/d

SIP kPa

FORM

INTRVL m

m

PERF ☐ OPEN HOLE ☐

REMARKS

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
49.3 – 474.9	GRNL	CMPL
49.3 – 474.9	DENL	"
214.0 – 474.6	DIL	"
49.3 – 474.6	LASL	"
–		
–		
–		

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	ANAL
–			
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / LAKE LEVEL	6.0		
DRIFT / LAKE BOTTOM	52.4		
PORT LAMBTON			
KETTLE POINT			
HAMILTON			
MARCELLUS			
DUNDEE			
COLUMBUS			
LUCAS			
AMHERSTBURG	136.0		
SYLVANIA			
BOIS BLANC	176.0		
SPRINGVALE			
ORISKANY			
BASS ISLANDS	193.0		
G SHALE	207.9		
F SHALE	212.9		
F SALT			
E CARBONATE	250.1		
D SALT/EQUIVALENT			
C SHALE	273.0		
B MARKER	282.6		
B EQUIVALENT	288.5		
B SALT			
B ANHYDRITE	296.8		
A2 CARBONATE	301.9		
A2 SALT			
A2 ANHYDRITE			
A1 CARBONATE	311.1		
A1 SALT			
A1 ANHYDRITE			
GUELPH	316.7		
ERAMOSA			
GOAT ISLAND			
GASPORT/MARTON			
DECEW	376.1		
ROCHESTER	387.3		
IRONDEQUOIT	405.0		
REYNALES/FOSSIL HILL	407.1		
THOROLD			
GRIMSBY	411.1		
CABOT HEAD	432.5		
MANITOULIN			
WHIRLPOOL	448.6		
QUEENSTON	452.0		
BLUE MOUNTAIN - GEORG. BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY	Haldimand	TWP	Lake Erie	BLK	70	TRAC	V-3	LOT		CON	
WELL NAME	Pembina Lake Erie 70-V-3			PERMIT	7285			INIT CLASS		DEV	
OPERATOR	Pembina Exploration Ltd			TARGET	CLT			CUR STATUS		GS-ABD	

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	Pembina Resources Ltd			PERMIT	1988-05-05	NORTH	m	TOP	165.0	
RIG TYPE	Rotary	DEPTHS		SPUD	1988-07-16	SOUTH	m	BOT	484.0	
CABLE TOP		KB ELEV	180.4	COMPTD	1988-07-20	EAST	m	TRAY	6758	
BOT		LOGGER	485.6	OFFCNF	1988-08-19	WEST	m			
ROTRY TOP	58.3	DRILLER	486.0	WRKOVR		LAT	42 35 14.3			
BOT	486.0	DEEP END		ABNDND	1988-07-21	LONG	79 36 44.1			
DRLG FLD		PLUG BK								

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
459.8 – 461.0	Show	NA
456.0 – 463.0	1.4	5000
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244	53.6	154.4	CEM	0
178	23.5	236.0	CEM	0

COMPLETION DATA

GAS	$10^3 m^3/d$
OIL	m^3/d
SIP	kPa
FORM	
INTRVL	m
	m
	m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
52.2 – 485.0	GRNL	CMPL
52.2 – 485.0	DENL	"
235.0 – 484.7	DIL	"
50.0 – 485.6	LASL	"
–		
–		
–		

PERF ☐ OPEN HOLE ☐

REMARKS

DST #1 - 456.0-463.0

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	MM
–			
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS		TOP	ELEV	THICK
	KB / LAKE LEVEL	6.0		
	DRIFT / LAKE BOTTOM	58.3		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON			
	MARCELLUS			
	DUNDEE			
	COLUMBUS			
	LUCAS			
	AMHERSTBURG	141.3		
	SYLVANIA			
	BOIS BLANC	179.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	203.7		
	G SHALE	215.3		
	F SHALE	219.9		
	F SALT			
	E CARBONATE	257.1		
	D SALT/EQUIVALENT			
	C SHALE	280.9		
	B MARKER	289.8		
	B EQUIVALENT	296.0		
	B SALT			
	B ANHYDRITE	304.0		
	A2 CARBONATE	309.4		
	A2 SALT			

SILURIAN	A2 ANHYDRITE			
	A1 CARBONATE	318.9		
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH	322.6		
	ERAMOSA			
	GOAT ISLAND			
	GASPORT/WIARTON			
	DECEW	379.0		
	ROCHESTER	393.4		
	IRONDEQUOIT	412.2		
	REYNALES/FOSSIL HILL	414.6		
	THOROLD			
	GRIMSBY	418.3		
	CABOT HEAD	444.1		
	MANITOULIN			
	WHIRLPOOL	459.8		
ORDOVICIAN	QUEENSTON	462.0		
	BLUE MOUNTAIN - GEORG BAY			
	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
	CAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY	Haldimand	TWP	Lake Erie	BLK	70	TRAC	X-4	LOT		CON	
WELL NAME	Pembina Lake Erie 70-X-4			PERMIT	7286			INIT CLASS		DEV	
OPERATOR	Pembina Exploration Ltd			TARGET	CLT			CUR STATUS		GS-ABD	

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	Pembina Resources Ltd			PERMIT	1988-05-05	NORTH	m	TOP	147.0	
RIG TYPE	Rotary	DEPTHS		SPUD	1988-07-09	SOUTH	m	BOT	484.0	
CABLE TOP		KB ELEV	180.4	COMPTD	1988-07-14	EAST	m	TRAY	7276	
BOT		LOGGER	485.1	OFFCNF	1988-08-13	WEST	m			
ROTRY TOP	57.4	DRILLER	485.0	WRKOVR		LAT	42 35 18.9			
BOT	485.0	DEEP END		ABNDND	1988-07-15	LONG	79 38 09.3			
DRLG FLD		PLUG BK								

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
430.3 – 433.5	Show	NA
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244	53.6	145.4	CEM	0
178	25.3	235.9	CEM	0

COMPLETION DATA

GAS	$10^3 m^3/d$
OIL	m^3/d
SIP	kPa
FORM	
INTRVL	m
	m
	m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
54.9 – 484.5	GRNL	CMPL
54.9 – 484.5	DENL	"
234.0 – 484.2	DIL	"
50.0 – 484.2	CMPL	"
–		
–		
–		

PERF ☐ OPEN HOLE ☐

REMARKS

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	MM
–			
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS		TOP	ELEV	THICK
	KB / LAKE LEVEL	6.0		
	DRIFT / LAKE BOTTOM	57.4		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON			
	MARCELLUS			
	DUNDEE			
	COLUMBUS			
	LUCAS			
	AMHERSTBURG	133.0		
	SYLVANIA			
	BOIS BLANC	159.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	206.5		
	G SHALE	211.7		
	F SHALE	216.5		
	F SALT			
	E CARBONATE	253.5		
	D SALT/EQUIVALENT			
	C SHALE	277.2		
	B MARKER	286.7		
	B EQUIVALENT	292.8		
	B SALT			
	B ANHYDRITE	301.3		
	A2 CARBONATE	306.9		
	A2 SALT			

SILURIAN	A2 ANHYDRITE			
	A1 CARBONATE	316.3		
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH	320.3		
	ERAMOSA			
	GOAT ISLAND			
	GASPORT/WIARTON			
	DECEW	376.9		
	ROCHESTER	390.2		
	IRONDEQUOIT	408.3		
	REYNALES/FOSSIL HILL	410.2		
	THOROLD			
	GRIMSBY	414.3		
	CABOT HEAD	437.4		
	MANITOULIN			
	WHIRLPOOL	455.3		
ORDOVICIAN	QUEENSTON	456.5		
	BLUE MOUNTAIN - GEORG BAY			
	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
	CAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY	Haldimand	TWP	Lake Erie	BLK	84	TRAC	B-2	LOT	CON
WELL NAME	Pembina Lake Erie #4-B				PERMIT	7285	INIT CLASS	DEV	
OPERATOR	Pembina Exploration Limited				TARGET	CLI	CUR STATUS	LH-ABD	

DRILLING DATA				DATES		COORDINATES		SAMPLES	
CONTRACTOR	Pembina Resources			PERMIT	1988-05-05	NORTH	m	TOP	169
RIG TYPE	Rotary	DEPTHS		SPUD	1988-07-05	SOUTH	m	BOT	493
CABLE TOP		KB ELEV	180.4	COMPTD	1988-07-08	EAST	m	TRAY	8565
BOT		LOGGER		OFFCNF	1988-08-07	WEST	m		
ROTRY TOP	53.7	DRILLER	493.0	WRKOVR		LAT	42-34-41.0		
BOT		DEEP END		ABNDND	1988-07-08	LONG	79-36-34.6		
DRLG FLD		PLUG BK	59.8						

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS	$10^3 m^3/d$
–			244	53.6	166.4	CEM		OIL	m^3/d
–			178	25.3	235.4	CEM		SIP	kPa
–								FORM	
–								INTRVL	m
–									m
–									m

INITIAL OIL RECORD			LOGGING RECORD			COMPLETION DATA
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	PERF ☐ OPEN HOLE ☐
–			–			REMARKS
–			–			No logs
–			–			
–			–			
–			–			

INITIAL WATER RECORD			CORING RECORD			
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	mm
–			–			
–			–			
–			–			
–			–			
–			–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / LAKE LEVEL	6.0		
	DRIFT / LAKE BOTTOM	53.7		
DEVONIAN	PORT LAMBTON			
DEVONIAN	KETTLE POINT			
DEVONIAN	HAMILTON			
DEVONIAN	MARCELLUS			
DEVONIAN	DUNDEE			
DEVONIAN	COLUMBUS			
DEVONIAN	LUCAS			
DEVONIAN	AMHERSTBURG	150.0		
DEVONIAN	SYLVANIA			
DEVONIAN	BOIS BLANC	188.5		
DEVONIAN	SPRINGVALE			
DEVONIAN	ORISKANY			
SILURIAN	BASS ISLANDS	208.5		
SILURIAN	G SHALE	222.0		
SILURIAN	F SHALE	229.0		
SILURIAN	F SALT			
SILURIAN	E CARBONATE	261.0		
SILURIAN	D SALT/EQUIVALENT			
SILURIAN	C SHALE	287.0		
SILURIAN	B MARKER	293.5		
SILURIAN	B EQUIVALENT	303.0		
SILURIAN	B SALT			
SILURIAN	B ANHYDRITE			
SILURIAN	A2 CARBONATE	313.0		
SILURIAN	A2 SALT			

SILURIAN	A2 ANHYDRITE			
SILURIAN	A1 CARBONATE			
SILURIAN	A1 SALT			
SILURIAN	A1 ANHYDRITE			
SILURIAN	GUELPH	333.0		
SILURIAN	ERAMOSA			
SILURIAN	GOAT ISLAND			
SILURIAN	GASPORT/WARTON			
SILURIAN	DECEW	392.0		
SILURIAN	ROCHESTER	404.5		
SILURIAN	IRONDEQUOIT	421.2		
SILURIAN	REYNALES/FOSSIL HILL	424.0		
SILURIAN	THOROLD	427.5		
SILURIAN	GRIMSBY	447.6		
SILURIAN	CABOT HEAD			
SILURIAN	MANITOULIN			
SILURIAN	WHIRLPOOL	462.5		
ORDOVICIAN	QUEENSTON	466.7		
ORDOVICIAN	BLUE MOUNTAIN - GEORG. BAY			
ORDOVICIAN	COLLINGWOOD			
ORDOVICIAN	COBOURG			
ORDOVICIAN	VERULAM			
ORDOVICIAN	KIRKFIELD			
ORDOVICIAN	COBOCONK			
ORDOVICIAN	GULL RIVER			
ORDOVICIAN	SHADOW LAKE			
	CAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY	Haldimand	TWP	Lake Erie	BLK	89	TRAC	B-3	LOT	CON
WELL NAME	Pembina Lake Erie 89-B-3				PERMIT	7349	INIT CLASS	DEV	
OPERATOR	Pembina Exploration Ltd				TARGET	CLI	CUR STATUS	GS-ABD	

DRILLING DATA				DATES		COORDINATES		SAMPLES	
CONTRACTOR	Pembina Resources Ltd			PERMIT	1988-07-11	NORTH	m	TOP	126.0
RIG TYPE	Rotary	DEPTHS		SPUD	1988-08-12	SOUTH	m	BOT	450.0
CABLE TOP		KB ELEV	180.4	COMPTD	1988-08-16	EAST	m	TRAY	7605
BOT		LOGGER	474.3	OFFCNF	1988-09-15	WEST	m		
ROTRY TOP	43.7	DRILLER	475.0	WRKOVR		LAT	42 34 15.0		
BOT	475.0	DEEP END		ABNDND	1988-08-17	LONG	80 01 44.8		
DRLG FLD		PLUG BK							

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS	$10^3 m^3/d$
407.4 – 408.3	SHOW	NA	244	53.6	123.6	CEM	0	OIL	m^3/d
–			178	25.3	215.9	CEM	0	SIP	kPa
–								FORM	
–								INTRVL	m
–									m
–									m

INITIAL OIL RECORD			LOGGING RECORD			COMPLETION DATA
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	PERF ☐ OPEN HOLE ☐
–			41.8 – 473.7	GRNL	CHPL	REMARKS
–			41.8 – 473.7	DENL	"	DST #1 - 404.5-410.5
–			215.7 – 473.2	DIL	"	
–			41.8 – 473.7	LASL	"	
–			–			
–			–			

INITIAL WATER RECORD			CORING RECORD			
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	mm
–			–			
–			–			
–			–			
–			–			
–			–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / LAKE LEVEL	6.0		
	DRIFT / LAKE BOTTOM	43.7		
DEVONIAN	PORT LAMBTON			
DEVONIAN	KETTLE POINT			
DEVONIAN	HAMILTON			
DEVONIAN	MARCELLUS			
DEVONIAN	DUNDEE	109.2		
DEVONIAN	COLUMBUS			
DEVONIAN	LUCAS			
DEVONIAN	AMHERSTBURG	132.0		
DEVONIAN	SYLVANIA			
DEVONIAN	BOIS BLANC	150.0		
DEVONIAN	SPRINGVALE			
DEVONIAN	ORISKANY	168.5		
SILURIAN	BASS ISLANDS	172.7		
SILURIAN	G SHALE	197.1		
SILURIAN	F SHALE	203.6		
SILURIAN	F SALT			
SILURIAN	E CARBONATE	239.6		
SILURIAN	D SALT/EQUIVALENT			
SILURIAN	C SHALE	263.0		
SILURIAN	B MARKER	270.3		
SILURIAN	B EQUIVALENT	276.0		
SILURIAN	B SALT			
SILURIAN	B ANHYDRITE	283.3		
SILURIAN	A2 CARBONATE	288.3		
SILURIAN	A2 SALT			

SILURIAN	A2 ANHYDRITE			
SILURIAN	A1 CARBONATE	299.0		
SILURIAN	A1 SALT			
SILURIAN	A1 ANHYDRITE			
SILURIAN	GUELPH	302.8		
SILURIAN	ERAMOSA			
SILURIAN	GOAT ISLAND			
SILURIAN	GASPORT/WARTON			
SILURIAN	DECEW	369.6		
SILURIAN	ROCHESTER	380.1		
SILURIAN	IRONDEQUOIT	401.0		
SILURIAN	REYNALES/FOSSIL HILL	403.4		
SILURIAN	THOROLD	405.0		
SILURIAN	GRIMSBY	407.4		
SILURIAN	CABOT HEAD	430.6		
SILURIAN	MANITOULIN			
SILURIAN	WHIRLPOOL	446.2		
ORDOVICIAN	QUEENSTON	449.0		
ORDOVICIAN	BLUE MOUNTAIN - GEORG. BAY			
ORDOVICIAN	COLLINGWOOD			
ORDOVICIAN	COBOURG			
ORDOVICIAN	VERULAM			
ORDOVICIAN	KIRKFIELD			
ORDOVICIAN	COBOCONK			
ORDOVICIAN	GULL RIVER			
ORDOVICIAN	SHADOW LAKE			
	CAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

T.R. Carter

CTY Haldimand TWP Lake Erie BLK 89 TRAC H-2 LOT CON

WELL NAME Pembina Lake Erie 89-H-2 PERMIT 7350 INIT CLASS DEV

OPERATOR Pembina Exploration Ltd TARGET CLI CUR STATUS GP

DRILLING DATA				DATES		COORDINATES		SAMPLES	
CONTRACTOR	Pembina Resources Ltd			PERMIT	1988-07-11	NORTH	m	TOP	129.0
RIG TYPE	Rotary	DEPTHS		SPUD	1988-08-21	SOUTH	m	BOT	485.0
CABLE TOP		KB ELEV	180.4	COMPTD	1988-08-30	EAST	m	TRAY	7885
BOT		LOGGER	486.7	OFFCNF	1988-09-29	WEST	m		
ROTRY TOP	26.4	DRILLER	486.7	WRKOVR		LAT	42 33 45.8		
BOT	486.7	DEEP END		ABNDND		LONG	80 02 44.3		
DRLG FLD		PLUG BK	473.0						

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
436.0 – 458.0	Show	NA
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244	53.6	127.3	CEM	0
178	25.3	224.8	CEM	0
114	14.1	483.5	CEM	0
60	7.0	453.7	HAN	0

COMPLETION DATA

GAS 12.5 $10^3 m^3/d$

OIL m^3/d

SIP NA kPa

FORM Whirlpool

INTRVL 456.0-458.0 m

m

m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
26.8 – 486.1	GRNL	CMPL
26.8 – 486.1	DENL	"
26.8 – 486.1	LASL	"
225.0 – 485.8	DIL	"
425.0 – 470.0	CCL	"
400.0 – 475.0	CMPL	"
–		

PERF ☒ OPEN HOLE ☐

REMARKS

DST #1 – 453.0-461.0

CORE ANALYSIS

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	ANAL
445.0 – 459.3	PRL	990	yes
–			
–			
–			
–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / LAKE LEVEL	6.0		
	DRIFT / LAKE BOTTOM	26.4		
DEVONIAN	PORT LAMBTON			
DEVONIAN	KETTLE POINT			
DEVONIAN	HAMILTON			
DEVONIAN	MARCELLUS			
DEVONIAN	DUNDEE	115.1		
DEVONIAN	COLUMBUS			
DEVONIAN	LUCAS			
DEVONIAN	AMHERSTBURG			
DEVONIAN	SYLVANIA			
DEVONIAN	BOIS BLANC	156.0		
DEVONIAN	SPRINGVALE			
DEVONIAN	ORISKANY	176.0		
SILURIAN	BASS ISLANDS	177.0		
SILURIAN	G SHALE	203.1		
SILURIAN	F SHALE	209.9		
SILURIAN	F SALT			
SILURIAN	E CARBONATE	246.1		
SILURIAN	D SALT/EQUIVALENT			
SILURIAN	C SHALE	269.2		
SILURIAN	B MARKER	278.0		
SILURIAN	B EQUIVALENT	283.5		
SILURIAN	B SALT			
SILURIAN	B ANHYDRITE	291.1		
SILURIAN	A2 CARBONATE	296.0		
SILURIAN	A2 SALT			
	A2 ANHYDRITE			
	A1 CARBONATE	306.3		
	A1 SALT			
	A1 ANHYDRITE			
SILURIAN	GUELPH	308.6		
SILURIAN	ERAMOSA			
SILURIAN	GOAT ISLAND			
SILURIAN	GASPORT/WIARTON			
SILURIAN	DECEW	379.9		
SILURIAN	ROCHESTER	386.2		
SILURIAN	IRONDEQUOIT	408.0		
SILURIAN	REYNALES/FOSSIL HILL	410.5		
SILURIAN	THOROLD	412.1		
SILURIAN	GRIMSBY	413.0		
SILURIAN	CABOT HEAD	431.2		
SILURIAN	MANITOULIN			
ORDOVICIAN	WHIRLPOOL	453.9		
ORDOVICIAN	QUEENSTON	458.0		
ORDOVICIAN	BLUE MOUNTAIN - GEORG BAY			
ORDOVICIAN	COLLINGWOOD			
ORDOVICIAN	COBOURG			
ORDOVICIAN	VERULAM			
ORDOVICIAN	KIRKFIELD			
ORDOVICIAN	COBOCONK			
ORDOVICIAN	GULL RIVER			
ORDOVICIAN	SHADOW LAKE			
CAMBRIAN	CAMBRIAN			
PRECAMBRIAN	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Haldimand TWP Oneida BLK TRAC LOT 66 CON R.R.

WELL NAME Armstrong 1 Oneida 66-R.R. PERMIT 7233 INIT CLASS DEV

OPERATOR Dorthy E. Armstrong TARGET CLI CUR STATUS GP

DRILLING DATA				DATES		COORDINATES		SAMPLES	
CONTRACTOR	Fred Moerschfelder			PERMIT	1988-03-11	NORTH	57.1 m	TOP	15.5
RIG TYPE	Cable	DEPTHS		SPUD	1988-03-11	SOUTH	m	BOT	185.3
CABLE TOP	0.0	KB ELEV	179.5	COMPTD	1988-04-11	EAST	2982.4 m	TRAY	7960
BOT	185.9	LOGGER		OFFCNF	1988-05-11	WEST	m		
ROTRY TOP		DRILLER	185.9	WRKOVR		LAT	42 55 13		
BOT		DEEP END		ABNDND		LONG	79 52 32		
DRLG FLD		PLUG BK							

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
163.4 –	Show	NA
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
178	NA	NA	BAR	0
114	NA	NA	BHP	0

COMPLETION DATA

GAS 0.06 $10^3 m^3/d$

OIL m^3/d

SIP 310.3 kPa

FORM Grimsby

INTRVL 163.4 m

m

m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
–		
–		
–		
–		
–		
–		

PERF ☐ * OPEN HOLE ☒

REMARKS

* Operator pick

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
7.6 –	4.6	FRE
80.8 –	4.6	SUL
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	ANAL
–			
–			
–			
–			
–			
–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / LAKE LEVEL	0.0		
	DRIFT / LAKE BOTTOM	0.0		
DEVONIAN	PORT LAMBTON			
DEVONIAN	KETTLE POINT			
DEVONIAN	HAMILTON			
DEVONIAN	MARCELLUS			
DEVONIAN	DUNDEE			
DEVONIAN	COLUMBUS			
DEVONIAN	LUCAS			
DEVONIAN	AMHERSTBURG			
DEVONIAN	SYLVANIA			
DEVONIAN	BOIS BLANC			
DEVONIAN	SPRINGVALE			
DEVONIAN	ORISKANY			
SILURIAN	BASS ISLANDS			
SILURIAN	G SHALE			
SILURIAN	F SHALE			
SILURIAN	F SALT			
SILURIAN	E CARBONATE	5.2		
SILURIAN	D SALT/EQUIVALENT			
SILURIAN	C SHALE	15.5		
SILURIAN	B MARKER	23.5		
SILURIAN	B EQUIVALENT	29.0		
SILURIAN	B SALT			
SILURIAN	B ANHYDRITE	32.0		
SILURIAN	A2 CARBONATE	42.0		
SILURIAN	A2 SALT			
	A2 ANHYDRITE			
	A1 CARBONATE	54.6		
	A1 SALT			
	A1 ANHYDRITE			
SILURIAN	GUELPH	57.9		
SILURIAN	ERAMOSA			
SILURIAN	GOAT ISLAND			
SILURIAN	GASPORT/WIARTON			
SILURIAN	DECEW	127.0		
SILURIAN	ROCHESTER	129.3		
SILURIAN	IRONDEQUOIT	143.9		
SILURIAN	REYNALES/FOSSIL HILL	146.2		
SILURIAN	THOROLD	147.8		
SILURIAN	GRIMSBY	151.5		
SILURIAN	CABOT HEAD	165.2		
SILURIAN	MANITOULIN			
ORDOVICIAN	WHIRLPOOL	182.7		
ORDOVICIAN	QUEENSTON	*184.7		
ORDOVICIAN	BLUE MOUNTAIN - GEORG BAY			
ORDOVICIAN	COLLINGWOOD			
ORDOVICIAN	COBOURG			
ORDOVICIAN	VERULAM			
ORDOVICIAN	KIRKFIELD			
ORDOVICIAN	COBOCONK			
ORDOVICIAN	GULL RIVER			
ORDOVICIAN	SHADOW LAKE			
CAMBRIAN	CAMBRIAN			
PRECAMBRIAN	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY	Huron	TWP	Hay	BLK		TRAC 3	LOT 23	CON XI	
WELL NAME	Ansell Lake Res. et al #1 Hay 3-23-XI			PERMIT	7415	INIT CLASS	DEV		
OPERATOR	PPC Oil and Gas Corp.			TARGET	SAL	CUR STATUS	GP-SUS		

DRILLING DATA				DATES		COORDINATES		SAMPLES	
CONTRACTOR	Eagle Drilling			PERMIT	1988-11-07	NORTH	107.0 m	TOP	74.0
RIG TYPE	Rotary	DEPTHS		SPUD	1988-11-15	SOUTH	m	BOT	615.0
CABLE TOP		KB ELEV	261.2	COMPTD	1988-11-25	EAST	m	TRAY	8716
BOT		LOGGER	615.0	OFFCNF	1988-12-25	WEST	647.4 m		
ROTRY TOP	2.2	DRILLER	615.0	WRKOVR	1990-05-14	LAT	43 25 44		
BOT	615.0	DEEP END		ABNDND		LONG	81 38 05		
DRLG FLD		PLUG BK							

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS	13.6 $10^3m^3/d$
574.0 –	14.2	2896	340	80.5	70.5	SHO	0	OIL	m^3/d
–			178	29.8	344.0	CEM	0	SIP	NA kPa
–			114	14.0	616.7	CEM	0	FORM	Guelph
–								INTRVL	568.0-574.0 m
–									m
–									m

INITIAL OIL RECORD			LOGGING RECORD			PERF ☒ OPEN HOLE ☐
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	REMARKS
–			20.0 – 614.3	GRNL	SCH	A-2 Shale at 464.9
–			340.0 – 614.3	LOT	"	Pinnacle Reef
–			340.0 – 614.3	PEF	"	
–			341.5 – 610.5	DLLM	"	
–			258.0 – 612.5	SONL	"	No samples 86-361
–			320.0 – 611.8	GRNL	CMPL	
			500.0 – 611.8	CMPL	"	

INITIAL WATER RECORD			CORING RECORD				
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	MM	
–			–				
–			–				
–			–				CBND - interval was
–			–				320.0 to 611.8
–			–				(Computalog)

GEOLOGICAL CONTACTS	TOP	ELEV	THICK					
KB	0.0				A2 ANHYDRITE	466.2		
DRIFT	2.2				A1 CARBONATE			
PORT LAMBTON					A1 SALT			
KETTLE POINT					A1 ANHYDRITE			
HAMILTON					GUELPH	467.0		
MARCELLUS					ERAMOSA			
DUNDEE	68.4				GOAT ISLAND	598.1		
COLUMBUS					GASPORT/WIARTON	608.5		
LUCAS	86.0				DECEW			
AMHERSTBURG					ROCHESTER			
SYLVANIA					IRONDEQUOIT			
BOIS BLANC					REYNALES/FOSSIL HILL			
SPRINGVALE					THOROLD			
ORISKANY					GRIMSBY			
BASS ISLANDS					CABOT HEAD			
G SHALE	325.3				MANITOULIN			
F SHALE	332.6				WHIRLPOOL			
F SALT					QUEENSTON			
E CARBONATE	386.0				BLUE MOUNTAIN - GEORG BAY			
D SALT/EQUIVALENT					COLLINGWOOD			
C SHALE	418.4				COBOURG			
B MARKER	424.1				VERULAM			
B EQUIVALENT	433.3				KIRKFIELD			
B SALT					COBOCONK			
B ANHYDRITE	445.3				GULL RIVER			
A2 CARBONATE	447.5				SHADOW LAKE			
A2 SALT					CAMBRIAN			
					PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY	Huron	TWP	Stanley	BLK		TRAC 3	LOT 5	CON X	
WELL NAME	Orford Res. et al 1 Stanley 3-5-X			PERMIT	7307	INIT CLASS	NPW		
OPERATOR	PPC Oil and Gas Corp.			TARGET	ORD	CUR STATUS	DH-ABD		

DRILLING DATA				DATES		COORDINATES		SAMPLES	
CONTRACTOR	Rawlings Drilling			PERMIT	1988-05-17	NORTH	m	TOP	51.8
RIG TYPE	Cable	DEPTHS		SPUD	1988-05-26	SOUTH	107.0 m	BOT	1114.7
CABLE TOP	1.4	KB ELEV	258.2	COMPTD	1988-08-20	EAST	362.0 m	TRAY	9517-
BOT	1114.7	LOGGER	1109.0	OFFCNF	1989-08-20	WEST	m		18
ROTRY TOP		DRILLER	1114.7	WRKOVR		LAT	43 28 31		
BOT		DEEP END		ABNDND	1988-09-08	LONG	81 37 52		
DRLG FLD		PLUG BK							

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS	$10^3m^3/d$
–			340	80.0	53.2	SHO	0	OIL	m^3/d
–			273	60.0	112.9	SHO	102.6	SIP	kPa
–			219	36.0	288.6	PAC	279.7	FORM	
–								INTRVL	m
–									m
–									m

INITIAL OIL RECORD			LOGGING RECORD			PERF ☐ OPEN HOLE ☐
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	REMARKS
–			12.0 – 1108.2	GRNL	SCH	A-2 Shale at 501.2
–			290.0 – 1108.2	LDT	"	
–			290.0 – 1108.2	PEF	"	
–			280.0 – 1106.3	SONL	"	
–			280.0 – 1106.0	DLLM	"	
–			45.0 – 1104.0	VSP	"	
			0.0 – 283.6	ACSL	Atlas Wire.	

INITIAL WATER RECORD			CORING RECORD			
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	MM
74.7 –	NA	FRE	–			
91.4 –	NA	FRE	–			
132.0 – 135.6	45.7	SUL	–			
–			–			
–			–			
–			–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK					
KB	0.0				A2 ANHYDRITE	528.3		
DRIFT	1.4				A1 CARBONATE	530.2		
PORT LAMBTON					A1 SALT			
KETTLE POINT					A1 ANHYDRITE	565.0		
HAMILTON					GUELPH	570.8		
MARCELLUS					ERAMOSA			
DUNDEE	53.5				GOAT ISLAND	578.1		
COLUMBUS	54.0				GASPORT/WIARTON	587.7		
LUCAS	61.0				DECEW			
AMHERSTBURG	129.0				ROCHESTER	591.5		
SYLVANIA					IRONDEQUOIT			
BOIS BLANC	172.8				REYNALES/FOSSIL HILL	595.9		
SPRINGVALE					THOROLD			
ORISKANY					GRIMSBY			
BASS ISLANDS	218.5				CABOT HEAD	598.0		
G SHALE	270.9				MANITOULIN	621.9		
F SHALE	278.6				WHIRLPOOL			
F SALT					QUEENSTON	636.0		
E CARBONATE	328.0				BLUE MOUNTAIN - GEORG BAY	736.6		
D SALT/EQUIVALENT	354.8				COLLINGWOOD			
C SHALE	369.2				COBOURG	861.1		
B MARKER	386.4				VERULAM	916.5		
B EQUIVALENT					KIRKFIELD	970.5		
B SALT	393.0				COBOCONK	1009.8		
B ANHYDRITE					GULL RIVER	1035.0		
A2 CARBONATE	471.4				SHADOW LAKE	1096.8		
A2 SALT	509.7				CAMBRIAN	1098.0		
					PRECAMBRIAN	1104.0		

GEOLOGY BY: T.R. Carter

CTY Huron TWP Stanley BLK TRAC 3 LOT 15 CON VII

WELL NAME Orford Res. et al #2 Stanley 3-15-VII PERMIT 7412 INIT CLASS NPW

OPERATOR PP Oil and Gas Corp. TARGET SAL CUR STATUS DH-ABD

DRILLING DATA				DATES		COORDINATES		SAMPLES	
CONTRACTOR	Eagle Drilling Services			PERMIT	1988-10-27	NORTH	m	TOP	270.0
RIG TYPE	Rotary	DEPTHS		SPUD	1988-10-27	SOUTH 120.0	m	BOT	5n6.0
CABLE TOP		KB ELEV	252.9	COMPTD	1988-11-08	EAST 377.0	m	TRAY	6523
BOT		LOGGER	571.3	OFFCNF	1989-11-08	WEST	m		
ROTRY TOP	2.3	DRILLER	572.0	WRKOVR		LAT 43 30 55			
BOT	572.0	DEEP END		ABNDND	1988-11-09	LONG 81 36 03.5			
DRLG FLD		PLUG BK							

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS	$10^3 m^3/d$
–			346	71.4	52.1	SHO	0	OIL	m^3/d
–			245	53.7	82.5	SHO	82.5	SIP	kPa
–			178	29.8	265.4	CEM	148.2	FORM	
–								INTRVL	m
–									m
–									m

INITIAL OIL RECORD			LOGGING RECORD			COMPLETION DATA
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	PERF ☐ OPEN HOLE ☐
–			0.0 – 571.3	GRNL	CMPL	REMARKS
–			–			A-2 Shale at 473.1
–			–			
–			–			No samples till 270m
–			–			
–			–			

INITIAL WATER RECORD			CORING RECORD			
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	mm
–			–			
–			–			
–			–			
–			–			
–			–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB ~~KIRKFIELD~~	0.0		
	DRIFT ~~ORDOVICIAN~~	2.3		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON			
	MARCELLUS			
	DUNDEE			
	COLUMBUS			
	LUCAS	47.7		
	AMHERSTBURG	106.0		
	SYLVANIA			
	BOIS BLANC	176.2		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	211.0		
	G SHALE	251.6		
	F SHALE	260.2		
	F SALT			
	E CARBONATE	305.1		
	D SALT ~~EQUIVALENT~~	328.8		
	C SHALE	343.0		
	B MARKER	359.2		
	B EQUIVALENT			
	B SALT	365.8		
	B ANHYDRITE			
	A2 CARBONATE	443.3		
	A2 SALT	481.6		
SILURIAN	A2 ANHYDRITE	496.2		
	A1 CARBONATE	498.3		
	A1 SALT			
	A1 ANHYDRITE	532.2		
	GUELPH	537.0		
	ERAMOSA			
	GOAT ISLAND	545.0		
	GASPORT/WIARTON	555.6		
	DECEW			
	ROCHESTER	559.0		
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL	564.0		
	THOROLD			
	GRIMSBY			
	CABOT HEAD	568.4		
	MANITOULIN			
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON			
	BLUE MOUNTAIN - GEORG BAY			
	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
	CAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Huron TWP Stephen BLK TRAC 2 LOT 23 CON XVI

WELL NAME Pamax et al 1 Stephen 2-23-XVI PERMIT 7248 INIT CLASS NPW

OPERATOR PPC Oil & Gas Corp. TARGET SAL CUR STATUS CP-SUSP

DRILLING DATA				DATES		COORDINATES		SAMPLES	
CONTRACTOR	Rawlings Drilling Company Ltd			PERMIT	1988-03-04	NORTH 107.7	m	TOP	21.3
RIG TYPE	Cable	DEPTHS		SPUD	1988-03-11	SOUTH	m	BOT	576.1
CABLE TOP	1.2	KB ELEV	208.0	COMPTD	1988-04-23	EAST 610.6	m	TRAY	9294
BOT	576.1	LOGGER	573.2	OFFCNF	1989-04-23	WEST	m		
ROTRY TOP		DRILLER	576.1	WRKOVR		LAT 43 19 54			
BOT		DEEP END		ABNDND		LONG 81 40 35			
DRLG FLD		PLUG BK	561.0						

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS 8.5	$10^3 m^3/d$
549.9 – 552.2	2,124	1034	330	4.7	25.1	SHO		OIL	m^3/d
549.9 – 552.2	1,416	1620	178	10.4	278.0	PAC		SIP	kPa
–			114	4.3	565.9	CEM		FORM Guelph	
–								INTRVL 549.9-550.4	m
–								551.0-552.2	m
–									m

INITIAL OIL RECORD			LOGGING RECORD			COMPLETION DATA
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	PERF & OPEN HOLE ☐
–			0 – 573.2	CNL	SCH	REMARKS
–			0 – 573.2	LDT	"	Pinnacle reef
–			240 – 573.2	LATL	"	A-2 Shale at 437.7
–			240 – 573.2	MSFL	"	
–			0 – 573.2	CBLK	"	
–			360 – 558	CBND	"	
–			460 – 558	CMPL	"	

INITIAL WATER RECORD			CORING RECORD			
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	mm
42.7 –	24.4	SUL	–			
560.2 – 561.7	347.2	SAL	–			
–			–			
–			–			
–			–			
–			–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB ~~KIRKFIELD~~	0.0		
	DRIFT ~~ORDOVICIAN~~	1.2		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON			
	MARCELLUS			
	DUNDEE	25.1		
	COLUMBUS			
	LUCAS	39.5		
	AMHERSTBURG	135.6		
	SYLVANIA			
	BOIS BLANC	189.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	208.5		
	G SHALE	265.8		
	F SHALE	272.0		
	F SALT			
	E CARBONATE	313.8		
	D SALT ~~EQUIVALENT~~	339.5		
	C SHALE	344.0		
	B MARKER	353.1		
	B EQUIVALENT			
	B SALT	359.0		
	B ANHYDRITE			
	A2 CARBONATE	418.6		
	A2 SALT			
SILURIAN	A2 ANHYDRITE	442.0		
	A1 CARBONATE			
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH	445.7		
	ERAMOSA			
	GOAT ISLAND			
	GASPORT/WIARTON			
	DECEW			
	ROCHESTER			
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL			
	THOROLD			
	GRIMSBY			
	CABOT HEAD			
	MANITOULIN			
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON			
	BLUE MOUNTAIN - GEORG BAY			
	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
	CAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY	Kent	TWP	Camden	BLK	TRAC 6	LOT 9	CON X Gore
WELL NAME	Cam-Dawn 1 Camden 6-9-X Gore			PERMIT	7331	INIT CLASS	DEV
OPERATOR	Colonial Petroleums Ltd			TARGET	SAL	CUR STATUS	GS-ABD

DRILLING DATA

CONTRACTOR	Charles Shaw Drilling Ltd	DEPTHS	
RIG TYPE	Cable	KB ELEV	188.5
CABLE TOP	1.2	LOGGER	495.4
BOT	499.0	DRILLER	499.0
ROTRY TOP		DEEP END	
BOT		PLUG BK	484.5
DRLG FLD			

DATES

PERMIT	1988-07-06
SPUD	1988-07-11
COMPTD	1988-08-10
OFFCNF	1988-09-09
WRKOVR	
ABNDND	1989-08-09

COORDINATES

NORTH		m
SOUTH	168.0	m
EAST	457.0	m
WEST		m
LAT	42 37 10	
LONG	82 05 20	

SAMPLES

TOP	10.0
BOT	499.0
TRAY	7962

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
477.0 – 483.0	11.3	5383
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
274	60.3	10.1	SHO	0
220	35.7	138.3	SHO	138.3
178	29.8	363.2	CEM	278.7
114	14.1	497.3	CEM	288.0
60	7.0	479.0	NA	479.0

COMPLETION DATA

GAS	11.3	$10^3 m^3/d$
OIL		m^3/d
SIP	5383	kPa
FORM	A-1 Carbonate	
INTRVL	474.5-477.5	m
		m
		m

PERF ☒ OPEN HOLE ☐

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
490.0 – 493.0	NA	NA
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
0.0 – 495.4	GRNL	CMPL
0.0 – 495.4	Denl	"
400.0 – 484.5	CMPL	"
–		
–		
–		
–		

REMARKS

A-2 Shale at 460.3

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
9.5 –	3.5	FRE
160.0 –	25.0	SUL
498.0 – 499.0	NA	SAL
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	ANAL
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB	0.0		
DRIFT	1.2		
PORT LAMBTON			
KETTLE POINT	10.0		
HAMILTON	59.0		
MARCELLUS			
DUNDEE	136.1		
COLUMBUS	164.5		
LUCAS	173.0		
AMHERSTBURG	213.0		
SYLVANIA			
BOIS BLANC	240.0		
SPRINGVALE			
ORISKANY	290.0		
BASS ISLANDS	292.7		
G SHALE	335.3		
F SHALE	342.0		
F SALT			
E CARBONATE	386.1		
D SALT/EQUIVALENT			
C SHALE	411.9		
B MARKER	420.7		
B EQUIVALENT	426.4		
B SALT			
B ANHYDRITE			
A2 CARBONATE	439.7		
A2 SALT			
A2 ANHYDRITE	466.8		
A1 CARBONATE	468.8		
A1 SALT			
A1 ANHYDRITE			
GUELPH			
ERAMOSA			
GOAT ISLAND			
GASPORT/WIARTON			
DECEW			
ROCHESTER			
IRONDEQUOIT			
REYNALES/FOSSIL HILL			
THOROLD			
GRIMSBY			
CABOT HEAD			
MANITOULIN			
WHIRLPOOL			
QUEENSTON			
BLUE MOUNTAIN - GEORG BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY	Kent	TWP	Camden	BLK	TRAC 1	LOT 11	CON XIV Gore
WELL NAME	Brett Camden Gore 1-11-XIV			PERMIT	7244	INIT CLASS	DEV
OPERATOR	H. Brett and Assoc. Ltd.			TARGET	Sal	CUR STATUS	GP

DRILLING DATA

CONTRACTOR	James Newport Drilling	DEPTHS	
RIG TYPE	Cable	KB ELEV	192.1
CABLE TOP	1.5	LOGGER	
BOT	444.0	DRILLER	444.0
ROTRY TOP		DEEP END	
BOT		PLUG BK	440.0
DRLG FLD			

DATES

PERMIT	1988-02-26
SPUD	1988-03-02
COMPTD	1988-04-08
OFFCNF	1988-05-08
WRKOVR	
ABNDND	

COORDINATES

NORTH	156.3	m
SOUTH		m
EAST		m
WEST	212.5	m
LAT	42 37 34	
LONG	82 00 47	

SAMPLES

TOP	18.0
BOT	443.0
TRAY	5709

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
415.0 –	0.4	NA
434.0 – 439.0	6.5	NA
45.0 – 49.0	Show	NA
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
273	75.9	20.6	SHO	0
219	35.7	98.0	SHO	0
178	29.8	314.7	CEM	174
114	14.1	432.5	CEM	0

COMPLETION DATA

GAS	6.5	$10^3 m^3/d$
OIL		m^3/d
SIP	4026.5	kPa
FORM	A-1 Carbonate	
INTRVL	432.5-440.0	m
		m
		m

PERF ☐ OPEN HOLE ☐

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
–		
–		
–		
–		
–		
–		

REMARKS

A-2 Shale at 429.0

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
132.0 –	NA	SUL
441.0 –	NA	SAL
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	ANAL
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB	0.0		
DRIFT	1.5		
PORT LAMBTON			
KETTLE POINT	18.0		
HAMILTON	33.0		
MARCELLUS			
DUNDEE	96.5		
COLUMBUS	129.0		
LUCAS	144.0		
AMHERSTBURG	184.0		
SYLVANIA			
BOIS BLANC	232.0		
SPRINGVALE			
ORISKANY			
BASS ISLANDS	261.0		
G SHALE	308.5		
F SHALE	317.0		
F SALT			
E CARBONATE	357.0		
D SALT/EQUIVALENT			
C SHALE	384.0		
B MARKER	396.5		
B EQUIVALENT	403.0		
B SALT			
B ANHYDRITE			
A2 CARBONATE	414.0		
A2 SALT			
A2 ANHYDRITE			
A1 CARBONATE	430.5		
A1 SALT			
A1 ANHYDRITE			
GUELPH	440.0		
ERAMOSA			
GOAT ISLAND			
GASPORT/WIARTON			
DECEW			
ROCHESTER			
IRONDEQUOIT			
REYNALES/FOSSIL HILL			
THOROLD			
GRIMSBY			
CABOT HEAD			
MANITOULIN			
WHIRLPOOL			
QUEENSTON			
BLUE MOUNTAIN - GEORG BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

T.R. Carter

CTY Kent TWP Chatham BLK TRAC 2 LOT 10 CON II
WELL NAME PPC Chatham 2-10-II PERMIT 7395 INIT CLASS NPW
OPERATOR PPC Oil and Gas Corp. TARGET ORD CUR STATUS GS-ABD

DRILLING DATA

CONTRACTOR	Corunna Drilling		
RIG TYPE	Rotary	DEPTHS	
CABLE TOP		KB ELEV	187.4
BOT		LOGGER	1200.2
ROTRY TOP	3.5	DRILLER	1202.1
BOT	1202.1	DEEP END	
DRLG FLD		PLUG BK	

DATES

PERMIT	1988-09-13
SPUD	1988-09-13
COMPTD	1988-09-24
OFFCNF	1989-09-24
WRKOVR	
ABNOND	1988-10-01

COORDINATES

NORTH		m
SOUTH	147.6	m
EAST	150.9	m
WEST		m
LAT	42 27 32.5	
LONG	82 14 28	

SAMPLES

TOP	45.0
BOT	1202.0
TRAY	9254-
	55

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
476.0 – 480.0	NA	NA
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
298	NA	45.0	CEM	0
219	NA	610.5	CEM	0

COMPLETION DATA

GAS	$10^3 m^3/d$
OIL	m^3/d
SIP	kPa
FORM	
INTRVL	m
	m
	m

PERF ☐ OPEN HOLE ☐

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
5.0 – 1199.3	GRNL	SCH
50.0 – 1199.3	LDT	"
50.0 – 1199.3	PEF	"
0.0 – 1102.9	SONL	"
45.0 – 1200.5	DLLM	"
25.0 – 1175.0	VSP	"
–		

REMARKS

A-2 Shale at 500.2

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
237.0 –	NA	SUL
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	ANN
–			
–			
–			
–			
–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
DEVONIAN	KB /LAKE LEVEL	0.0		
	DRIFT /MUSKEGONIAN	3.5		
	PORT LAMBTON			
	KETTLE POINT	23.2		
	HAMILTON	50.3		
	MARCELLUS			
	DUNDEE	133.0		
	COLUMBUS	168.0		
	LUCAS	171.0		
	AMHERSTBURG	211.0		
	SYLVANIA			
	BOIS BLANC	269.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	318.0		
	G SHALE	365.6		
	F SHALE	372.6		
	F SALT			
	E CARBONATE	415.9		
	D SALT/EQUIVALENT			
	C SHALE	445.9		
	B MARKER	456.0		
	B EQUIVALENT	461.3		
	B SALT			
	B ANHYDRITE	470.1		
	A2 CARBONATE	476.3		
	A2 SALT			
SILURIAN	A2 ANHYDRITE	508.4		
	A1 CARBONATE	510.2		
	A1 SALT			
	A1 ANHYDRITE	526.9		
	GUELPH	527.9		
	ERAMOSA			
	GOAT ISLAND	547.3		
	GASPORT/WIARTON	578.0		
	DECEW			
	ROCHESTER	594.0		
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL	602.6		
	THOROLD			
	GRIMSBY			
	CABOT HEAD	603.7		
	MANITOULIN	639.5		
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON	651.5		
	BLUE MOUNTAIN - GEORG BAY	755.3		
	COLLINGWOOD			
	COBOURG	879.0		
	VERULAM	920.0		
	KIRKFIELD	968.0		
	COBOCONK	1012.0		
	GULL RIVER	1044.3		
	SHADOW LAKE	1153.7		
	CAMBRIAN	1155.5		
	PRECAMBRIAN	1158.9		

GEOLOGY BY: T.R. Carter

CTY Kent TWP Dover BLK TRAC 3 LOT 3 CON IV E
WELL NAME PPC/Ram 13 Dover 3-3-IV E PERMIT 7289 INIT CLASS NPW
OPERATOR PPC Oil and Gas Corp. TARGET ORD CUR STATUS OP

DRILLING DATA

CONTRACTOR	Corunna Drilling		
RIG TYPE	Rotary	DEPTHS	
CABLE TOP		KB ELEV	178.3
BOT		LOGGER	1105.0
ROTRY TOP	3.5	DRILLER	1106.0
BOT	1106.0	DEEP END	
DRLG FLD		PLUG BK	1039.0

DATES

PERMIT	1988-05-09
SPUD	1988-05-13
COMPTD	1988-05-21
OFFCNF	1988-06-20
WRKOVR	
ABNOND	

COORDINATES

NORTH	833.0	m
SOUTH		m
EAST	150.0	m
WEST		m
LAT	42 21 51	
LONG	82 21 30	

SAMPLES

TOP	102.0
BOT	1106.0
TRAY	9243-
	44

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
298	42.9	102.0	CEM	0
219	35.7	593.5	CEM	0
129.7	22.7	1090.0	CEM	0

COMPLETION DATA

GAS	$10^3 m^3/d$
OIL	NA m^3/d
SIP	kPa
FORM	Coboconk
INTRVL	1000.5-1007.0 m
	m
	m

PERF ☒ OPEN HOLE ☐

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
20.0 – 1105.0	GRNL	SCH
500.0 – 1072.5	CBVD	"
500.0 – 1072.5	CBND	"
580.0 – 1105.0	LDT	"
580.0 – 1105.0	PEF	"
595.0 – 1102.0	SONL	"
595.0 – 1105.0	DLLM	"

REMARKS

A-2 Shale of 473.4

ELPR was run from 850.0 to 1105.0 (SCH)
FMS was run from 950.0 to 1070.0 (SCH)
CMPL was run from 980.0 to 1045.0 (SCH)
CMPL was run from 875.0 to 1070.0 (CMPL)

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
140.0 –	NA	NA
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	ANN
–			
–			
–			
–			
–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
DEVONIAN	KB /LAKE LEVEL	0.0		
	DRIFT /MUSKEGONIAN	3.5		
	PORT LAMBTON			
	KETTLE POINT	22.9		
	HAMILTON	31.4		
	MARCELLUS			
	DUNDEE	98.0		
	COLUMBUS	135.0		
	LUCAS	150.0		
	AMHERSTBURG	183.0		
	SYLVANIA			
	BOIS BLANC	243.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	288.0		
	G SHALE	331.5		
	F SHALE	338.4		
	F SALT			
	E CARBONATE	384.0		
	D SALT/EQUIVALENT			
	C SHALE	414.2		
	B MARKER	430.9		
	B EQUIVALENT	436.2		
	B SALT			
	B ANHYDRITE	445.0		
	A2 CARBONATE	450.5		
	A2 SALT			
SILURIAN	A2 ANHYDRITE	480.8		
	A1 CARBONATE	483.3		
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH	495.2		
	ERAMOSA			
	GOAT ISLAND	521.0		
	GASPORT/WIARTON	561.2		
	DECEW			
	ROCHESTER	575.0		
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL	582.3		
	THOROLD			
	GRIMSBY			
	CABOT HEAD	584.1		
	MANITOULIN	620.0		
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON	633.9		
	BLUE MOUNTAIN - GEORG BAY	726.3		
	COLLINGWOOD			
	COBOURG	861.7		
	VERULAM	901.0		
	KIRKFIELD	941.5		
	COBOCONK	982.4		
	GULL RIVER	1014.8		
	SHADOW LAKE			
	CAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Kent TWP Dover BLK TRAC 5 LOT 4 CON IV E

WELL NAME PPC/RAM 25 Dover 5-4-IV E PERMIT 7387 INIT CLASS DEV

OPERATOR PPC Oil and Gas Corp. TARGET ORD CUR STATUS OP

DRILLING DATA

CONTRACTOR	Corunna Drilling		
RIG TYPE	Rotary	DEPTHS	
CABLE TOP		KB ELEV	179.1
BOT		LOGGER	1078.0
ROTRY TOP	3.5	DRILLER	1078.2
BOT	1078.2	DEEP END	
DRLG FLD		PLUG BK	

DATES

PERMIT	1988-08-31
SPUD	1988-08-31
COMPTD	1988-09-09
OFFCNF	1988-10-09
WRKOVR	1989-12-07
ABNDND	

COORDINATES

NORTH	689.0	m
SOUTH		m
EAST		m
WEST	150.0	m
LAT	42 22 08	
LONG	82 20 56.5	

SAMPLES

TOP	101.0
BOT	1078.0
TRAY	9489-90

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
298	62.5	101	CEM	0
219	35.7	594	CEM	0
139	22.7	1077	CEM	0

COMPLETION DATA

GAS	9.9	$10^3 m^3/d$
OIL	0.8	m^3/d
SIP		kPa
FORM	Coboconk, Kirkfie	d
INTRVL	988.4-991.4	m
		m
		m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
1046.0 –	Show	NA
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
35.0 – 1077.5	GRNL	SCH
590.0 – 1077.5	LDT	"
590.0 – 1077.5	PEF	"
594.0 – 1072.6	ELPR	"
594.0 – 1074.6	SONL	"
594.0 – 1073.6	DLLM	"
550.0 – 1053.0	CBVD	"

PERF ☒ OPEN HOLE ☐

REMARKS

DST #1 - Interval was 988.0-1016.0

DST #2 - Interval was 942.0-957.0

A-2 Shale at 477.0

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	MM
–			
–			
–			
–			
–			

Logs run by SCH

CMPL - 925.0-1053.0

CBND - 550.0-1056.5

CMPL run by Computalog Interval 925.0-1005.0

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB (BLOCK ERROR)	0.0		
DRIFT (BLOCK ERROR)	3.5		
PORT LAMBTON			
KETTLE POINT			
HAMILTON			
MARCELLUS			
DUNDEE	86.3		
COLUMBUS	125.0		
LUCAS	137.0		
AMHERSTBURG	170.0		
SYLVANIA			
BOIS BLANC	277.0		
SPRINGVALE			
ORISKANY			
BASS ISLANDS	269.0		
G SHALE	312.0		
F SHALE	319.0		
F SALT			
E CARBONATE	364.0		
D SALT/EQUIVALENT			
C SHALE	395.0		
B MARKER	410.0		
B EQUIVALENT	415.5		
B SALT	423.2		
B ANHYDRITE	453.4		
A2 CARBONATE	456.3		
A2 SALT			
A2 ANHYDRITE	483.8		
A1 CARBONATE	486.4		
A1 SALT			
A1 ANHYDRITE			
GUELPH	501.4		
ERAMOSA			
GOAT ISLAND	521.4		
GASPORT/WIARTON	569.0		
DECEW			
ROCHESTER	579.3		
IRONDEQUOIT			
REYNALES/FOSSIL HILL	587.0		
THOROLD			
GRIMSBY			
CABOT HEAD	588.9		
MANITOULIN	624.0		
WHIRLPOOL			
QUEENSTON	637.1		
BLUE MOUNTAIN - GEORG BAY	730.4		
COLLINGWOOD			
COBOURG	862.4		
VERULAM	901.7		
KIRKFIELD	941.5		
COBOCONK	986.0		
GULL RIVER	1017.4		
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Kent TWP Dover BLK TRAC 7 LOT 5 CON IV E

WELL NAME PPC 16 Dover 7-5-IV E PERMIT 7220 INIT CLASS NPW

OPERATOR PPC Oil and Gas Corp. TARGET ORD CUR STATUS OP-GS

DRILLING DATA

CONTRACTOR	Corunna Drilling Ltd		
RIG TYPE	Rotary	DEPTHS	
CABLE TOP		KB ELEV	179.9
BOT		LOGGER	1070.0
ROTRY TOP	3.7	DRILLER	1070.0
BOT	1070.0	DEEP END	
DRLG FLD		PLUG BK	

DATES

PERMIT	1988-01-05
SPUD	1988-01-08
COMPTD	1988-01-19
OFFCNF	1989-01-19
WRKOVR	
ABNDND	

COORDINATES

NORTH	341.3	m
SOUTH		m
EAST	106.7	m
WEST	42 22 04.5	m
LAT	82 20 38	
LONG		

SAMPLES

TOP	93.0
BOT	1069.0
TRAY	9227-28

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
1012 – 1015	Show	NA
1020 – 1023.5	Show	NA
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
298.0	62.5	92.5	CEM	0
219.0	35.7	603.0	CEM	0
139.7	21.5	1064.1	CEM	0

COMPLETION DATA

GAS	22.2	$10^3 m^3/d$
OIL	25.4	m^3/d
SIP	8259.9	kPa
FORM	Coboconk/Gull River	
INTRVL	1016.5-1020.25	m
	1025.5-1028.5	m
		m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
1012 – 1015	Show	NA
1020 – 1023.5	Show	NA
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
15.0 – 1069.3	GRNL	SCH
598.0 – 1069.3	LDT	"
603.0 – 1069.3	NGRS	"
550.0 – 1041.0	CBVD	"
603.0 – 1069.7	DLLM	"
598.0 – 1069.3	PEF	"
1000.0 – 1035.0	CAL.CMPL	"

PERF ☒ OPEN HOLE ☐

REMARKS

DST #1 - Interval tested 1006.6-1070.0

A-2 Shale at 477.3

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	MM
–			
–			
–			
–			
–			

CBND - Interval run was 550.0 - 1035.0

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB (BLOCK ERROR)	0.0		
DRIFT (BLOCK ERROR)	3.7		
PORT LAMBTON			
KETTLE POINT	22.2		
HAMILTON	25.0		
MARCELLUS			
DUNDEE	87.0		
COLUMBUS			
LUCAS	123.0		
AMHERSTBURG	171.0		
SYLVANIA			
BOIS BLANC	249.0		
SPRINGVALE			
ORISKANY			
BASS ISLANDS	265.0		
G SHALE	311.5		
F SHALE	318.8		
F SALT			
E CARBONATE	362.0		
D SALT/EQUIVALENT			
C SHALE	392.1		
B MARKER	407.2		
B EQUIVALENT	412.6		
B SALT	420.6		
B ANHYDRITE			
A2 CARBONATE	451.8		
A2 SALT			
A2 ANHYDRITE	484.3		
A1 CARBONATE	486.9		
A1 SALT			
A1 ANHYDRITE			
GUELPH	499.0		
ERAMOSA			
GOAT ISLAND	521.4		
GASPORT/WIARTON	571.4		
DECEW			
ROCHESTER	581.8		
IRONDEQUOIT			
REYNALES/FOSSIL HILL	589.3		
THOROLD			
GRIMSBY			
CABOT HEAD	590.9		
MANITOULIN	626.3		
WHIRLPOOL			
QUEENSTON	640.5		
BLUE MOUNTAIN - GEORG BAY	732.6		
COLLINGWOOD			
COBOURG	866.5		
VERULAM	904.2		
KIRKFIELD	946.9		
COBOCONK	991.3		
GULL RIVER	1023.3		
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

T.R. Carter

CTY Kent TWP Dover BLK TRAC 5 LOT 5 CON IV E

WELL NAME PPC et al 15 Dover 5-5-IV E PERMIT 7240 INIT CLASS NPW

OPERATOR PPC Oil and Gas Corp. TARGET ORD CUR STATUS OP-GS

DRILLING DATA

CONTRACTOR	Corwana Drilling Ltd		
RIG TYPE	Rotary	DEPTHS	
CABLE TOP		KB ELEV	180.0
BOT		LOGGER	1066.4
ROTRY TOP	3.7	DRILLER	1067.0
BOT	1067.0	DEEP END	
DRLG FLD		PLUG BK	1052.0

DATES

PERMIT	1988-02-15
SPUD	1988-02-14
COMPTD	1988-02-23
OFFCNF	1989-02-23
WRKOVR	
ABNDND	

COORDINATES

NORTH	506.0	m
SOUTH		m
EAST		m
WEST	150.0	m
LAT	42 22 16	
LONG	82 20 30.5	

SAMPLES

TOP	102.0
BOT	1067.0
TRAY	9479-80

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
983.0 – 1002.0	Show	8053
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
298	62.4	102.0	CEM	0
219	34.7	604.0	CEM	0
139.7	20.8	1066.0	CEM	0

COMPLETION DATA

GAS	4.2	$10^3 m^3/d$
OIL	23.8	m^3/d
SIP	6474*	kPa
FORM	Coboconk/Gull river	
INTRVL	1034.3-1047.1	m
	1016.2-1023.0	m
		m

PERF ☒ OPEN HOLE ☐

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
983.0 – 1002.0	Show	NA
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
0.0 – 1066.0	GRNL	SCH
602.5 – 1066.0	LDT	"
602.5 – 1066.0	PEF	"
602.5 – 1067.0	SONL	"
602.5 – 1066.0	DLLM	"
860.0 – 1060.0	CBLK	"
950.0 – 1051.5	GRNL	CHPL

REMARKS

DST #1 - Interval was 1011.0 to 1167.0

DST #2 - Interval was 983.0 to 1002.0

*ISIP in lower zone was 8129KPa

A-2 Shale at 486.3

CCL run from 970.0 to 1051.5 (Computalog)

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
891.0 – 926.0	NA	NA
926.0 – 968.0	NA	NA
1036.0– 1042.0	NA	NA
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	ANAL
–			
–			
–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB ~~XXXXXXXX~~	0.0		
	DRIFT ~~XXXXXXXX~~	3.7		
DEVONIAN	PORT LAMBTON			
DEVONIAN	KETTLE POINT	22.5		
DEVONIAN	HAMILTON	25.5		
DEVONIAN	MARCELLUS			
DEVONIAN	DUNDEE	89.2		
DEVONIAN	COLUMBUS			
DEVONIAN	LUCAS	125.0		
DEVONIAN	AMHERSTBURG	170.0		
DEVONIAN	SYLVANIA			
DEVONIAN	BOIS BLANC	225.0		
DEVONIAN	SPRINGVALE			
DEVONIAN	ORISKANY			
SILURIAN	BASS ISLANDS	264.5		
SILURIAN	G SHALE	308.8		
SILURIAN	F SHALE	315.4		
SILURIAN	F SALT			
SILURIAN	E CARBONATE	359.1		
SILURIAN	D SALT/EQUIVALENT			
SILURIAN	C SHALE	390.6		
SILURIAN	B MARKER	405.8		
SILURIAN	B EQUIVALENT	411.2		
SILURIAN	B SALT	418.6		
SILURIAN	B ANHYDRITE			
SILURIAN	A2 CARBONATE	452.0		
SILURIAN	A2 SALT			
SILURIAN	A2 ANHYDRITE	491.4		
SILURIAN	A1 CARBONATE	493.9		
SILURIAN	A1 SALT			
SILURIAN	A1 ANHYDRITE			
SILURIAN	GUELPH	510.9		
SILURIAN	ERAMOSA			
SILURIAN	GOAT ISLAND	530.3		
SILURIAN	GASPORT/WIARTON	579.4		
SILURIAN	DECEW			
SILURIAN	ROCHESTER	590.0		
SILURIAN	IRONDEQUOIT			
SILURIAN	REYNALES/FOSSIL HILL	597.7		
SILURIAN	THOROLD			
SILURIAN	GRIMSBY			
SILURIAN	CABOT HEAD	599.3		
SILURIAN	MANITOULIN	634.9		
SILURIAN	WHIRLPOOL			
ORDOVICIAN	QUEENSTON	648.9		
ORDOVICIAN	BLUE MOUNTAIN - GEORG BAY	741.7		
ORDOVICIAN	COLLINGWOOD			
ORDOVICIAN	COBOURG	871.8		
ORDOVICIAN	VERULAM	908.9		
ORDOVICIAN	KIRKFIELD	950.0		
ORDOVICIAN	COBOCONK	994.0		
ORDOVICIAN	GULL RIVER	1025.9		
ORDOVICIAN	SHADOW LAKE			
CAMBRIAN	CAMBRIAN			
PRECAMBRIAN	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Kent TWP Dover BLK TRAC 1 LOT 5 CON IV E

WELL NAME PPC #14 Dover 1-5-IV E PERMIT 7210 INIT CLASS DEV

OPERATOR PPC Oil and Gas Corp. TARGET ORD CUR STATUS GP

DRILLING DATA

CONTRACTOR	Underwater Gas Developers Ltd		
RIG TYPE	Rotary	DEPTHS	
CABLE TOP		KB ELEV	179.7
BOT		LOGGER	1159.2
ROTRY TOP	4.7	DRILLER	1159.2
BOT	1159.2	DEEP END	
DRLG FLD		PLUG BK	

DATES

PERMIT	1987-12-18
SPUD	1987-12-19
COMPTD	1988-01-14
OFFCNF	1988-02-13
WRKOVR	
ABNDND	

COORDINATES

NORTH		m
SOUTH	323.0	m
EAST		m
WEST	143.0	m
LAT	42 22 29.5	
LONG	82 20 47.5	

SAMPLES

TOP	102
BOT	1161
TRAY	9288-89

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
919.0 – 921.0	SHOW	NA
926.0 – 930.0	SHOW	NA
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244	54.0	99.7	CEM	0
178	25.3	474.2	CEM	0
114	14.0	1069.7	CEM	0

COMPLETION DATA

GAS	9.9	$10^3 m^3/d$
OIL	0	m^3/d
SIP	6619	kPa
FORM	Verulam	
INTRVL	917.0-922.5	m
		m
		m

PERF ☒ OPEN HOLE ☐

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
472.0 – 1155.8	SONL	SCH
472.0 – 1155.2	DLLM	"
472.0 – 1158.2	NGRS	"
15.0 – 1158.2	GRNL	"
467.0 – 1158.2	LDT	"
467.0 – 1158.2	PEF	"
875.0 – 1152.0	ELPR	"

REMARKS

DST #1: 902.0m to 929.0m

A-2 Shale at 486.3

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	ANAL
–			
–			
–			
–			
–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB ~~XXXXXXXX~~	0.0		
	DRIFT ~~XXXXXXXX~~	4.7		
DEVONIAN	PORT LAMBTON			
DEVONIAN	KETTLE POINT	22.0		
DEVONIAN	HAMILTON	28.8		
DEVONIAN	MARCELLUS			
DEVONIAN	DUNDEE	88.2		
DEVONIAN	COLUMBUS	129.0		
DEVONIAN	LUCAS	145.0		
DEVONIAN	AMHERSTBURG	180.0		
DEVONIAN	SYLVANIA			
DEVONIAN	BOIS BLANC	228.0		
DEVONIAN	SPRINGVALE			
DEVONIAN	ORISKANY			
SILURIAN	BASS ISLANDS	260.0		
SILURIAN	G SHALE	308.3		
SILURIAN	F SHALE	315.2		
SILURIAN	F SALT			
SILURIAN	E CARBONATE	361.0		
SILURIAN	D SALT/EQUIVALENT			
SILURIAN	C SHALE	391.9		
SILURIAN	B MARKER	405.9		
SILURIAN	B EQUIVALENT	411.5		
SILURIAN	B SALT	417.2		
SILURIAN	B ANHYDRITE			
SILURIAN	A2 CARBONATE	460.5		
SILURIAN	A2 SALT			
SILURIAN	A2 ANHYDRITE	493.0		
SILURIAN	A1 CARBONATE	495.7		
SILURIAN	A1 SALT			
SILURIAN	A1 ANHYDRITE			
SILURIAN	GUELPH	506.8		
SILURIAN	ERAMOSA			
SILURIAN	GOAT ISLAND	532.8		
SILURIAN	GASPORT/WIARTON	580.6		
SILURIAN	DECEW			
SILURIAN	ROCHESTER	591.9		
SILURIAN	IRONDEQUOIT			
SILURIAN	REYNALES/FOSSIL HILL	599.9		
SILURIAN	THOROLD			
SILURIAN	GRIMSBY			
SILURIAN	CABOT HEAD	601.1		
SILURIAN	MANITOULIN	637.0		
SILURIAN	WHIRLPOOL			
ORDOVICIAN	QUEENSTON	650.0		
ORDOVICIAN	BLUE MOUNTAIN - GEORG BAY	745.2		
ORDOVICIAN	COLLINGWOOD			
ORDOVICIAN	COBOURG	878.0		
ORDOVICIAN	VERULAM	915.0		
ORDOVICIAN	KIRKFIELD	955.5		
ORDOVICIAN	COBOCONK	999.9		
ORDOVICIAN	GULL RIVER	1032.9		
ORDOVICIAN	SHADOW LAKE	1139.5		
CAMBRIAN	CAMBRIAN	1142.0		
PRECAMBRIAN	PRECAMBRIAN	1144.3		

GEOLOGY BY: T.R. Carter

CTY Kent TWP Dover BLK TRAC 2-6 LOT 6 CON IV E

WELL NAME PPC/RAM Disposal 1 Dover 2-6-6-IV E PERMIT 7377 INIT CLASS BD

OPERATOR PPC Oil and Gas Corp TARGET DEV CUR STATUS BD

DRILLING DATA

CONTRACTOR Eagle Drilling Services
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 178.5
BOT LOGGER 188.0
ROTRY TOP 2.5 DRILLER 190.0
BOT 190.0 DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-08-19
SPUD 1988-09-27
COMPTD 1988-09-29
OFFCNF 1988-10-29
WRKOVR
ABNDND

COORDINATES

NORTH 566.4 m
SOUTH m
EAST 108.0 m
WEST m
LAT 42 22 21
LONG 82 20 27

SAMPLES

TOP 40.3
BOT 183.0
TRAY 5289

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
178	34.0	39.7	CEM	0
114	14.8	119.8	CEM	0
60	7.0	107.0	HAN	0

COMPLETION DATA

GAS $10^3 m^3/d$
OIL m^3/d
SIP kPa
FORM Lucas
INTRVL m
m
m
PERF ☐ OPEN HOLE ☒

REMARKS

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
0.0 – 188.0	GRNL	CMPL
0.0 – 188.0	DENL	"
–		
–		
–		
–		
–		

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS

		TOP	ELEV	THICK
	KB / [illegible]	0.0		
	DRIFT / [illegible]	2.5		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON	22.3		
	MARCELLUS			
	DUNDEE	88.8		
	COLUMBUS	127.0		
	LUCAS	133.0		
	AMHERSTBURG	178.0		
	SYLVANIA			
	BOIS BLANC			
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS			
	G SHALE			
	F SHALE			
	F SALT			
	E CARBONATE			
	D SALT/EQUIVALENT			
	C SHALE			
	B MARKER			
	B EQUIVALENT			
	B SALT			
	B ANHYDRITE			
	A2 CARBONATE			
	A2 SALT			
SILURIAN	A2 ANHYDRITE			
	A1 CARBONATE			
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH			
	ERAMOSA			
	GOAT ISLAND			
	GASPORT/WARTON			
	DECEW			
	ROCHESTER			
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL			
	THOROLD			
	GRIMSBY			
	CABOT HEAD			
	MANITOULIN			
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON			
	BLUE MOUNTAIN - GEORG BAY			
	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
CAMBRIAN				
PRECAMBRIAN				

GEOLOGY BY: T.R. Carter

CTY Kent TWP Dover BLK TRAC 6 LOT 6 CON IV E

WELL NAME PPC 12 Dover 6-6-IV E PERMIT 7215 INIT CLASS NPW

OPERATOR PPC Oil and Gas Corp. TARGET ORD CUR STATUS OP

DRILLING DATA

CONTRACTOR Corunna Drilling Ltd
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 179.6
BOT LOGGER 1080.7
ROTRY TOP 3.7 DRILLER 1081.4
BOT 1081.4 DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-02-23
SPUD 1988-02-29
COMPTD 1988-03-10
OFFCNF 1989-03-10
WRKOVR
ABNDND

COORDINATES

NORTH 333.0 m
SOUTH m
EAST 264.5 m
WEST m
LAT 42 22 21
LONG 82 20 12

SAMPLES

TOP 105.0
BOT 624.0
TRAY 9466

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
298	62.4	104.5	CEM	0
219	34.7	609.0	CEM	0
139.7	20.8	1081.0	CEM	0

COMPLETION DATA

GAS .013 $10^3 m^3/d$
OIL 14.3 m^3/d
SIP 8149.0 kPa
FORM Coboconk
INTRVL 1017.5-1031.7 m
m
m
PERF ☒ OPEN HOLE ☐

REMARKS

DST #1- Interval was 1010.0-1036.0

Core Analysis

A-2 Shale at 487.0

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
1002.0 – 1030.0		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
10.0 – 1080.7	GRNL	SCH
600.0 – 1080.7	LDT	"
600.0 – 1080.7	PEF	"
608.0 – 1080.7	DLLM	"
608.0 – 1080.7	SONL	"
–		
–		

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
1005.0 – 1010.5	PRL	955	yes
1010.5 – 1024.0	PRL	955	yes
–			
–			
–			

GEOLOGICAL CONTACTS

		TOP	ELEV	THICK
	KB/[illegible]	0.0		
	DRIFT / [illegible]	3.7		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT	23.0		
	HAMILTON	24.9		
	MARCELLUS			
	DUNDEE	90.0		
	COLUMBUS	129.0		
	LUCAS	144.0		
	AMHERSTBURG	174.0		
	SYLVANIA			
	BOIS BLANC	222.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	258.0		
	G SHALE	307.1		
	F SHALE	313.8		
	F SALT			
	E CARBONATE	359.2		
	D SALT/EQUIVALENT			
	C SHALE	388.8		
	B MARKER	404.9		
	B EQUIVALENT	410.8		
	B SALT	417.2		
	B ANHYDRITE			
	A2 CARBONATE	464.3		
	A2 SALT			
SILURIAN	A2 ANHYDRITE	493.0		
	A1 CARBONATE	495.8		
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH	511.2		
	ERAMOSA			
	GOAT ISLAND	534.6		
	GASPORT/WARTON	582.7		
	DECEW			
	ROCHESTER	593.3		
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL	601.0		
	THOROLD			
	GRIMSBY			
	CABOT HEAD	602.7		
	MANITOULIN	638.1		
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON	651.5		
	BLUE MOUNTAIN - GEORG BAY	747.7		
	COLLINGWOOD			
	COBOURG	876.9		
	VERULAM	915.3		
	KIRKFIELD	957.8		
	COBOCONK	1002.2		
	GULL RIVER	1034.8		
	SHADOW LAKE			
CAMBRIAN				
PRECAMBRIAN				

GEOLOGY BY: T.R. Carter

T.R. Carter

CTY Kent TWP Dover BLK TRAC 3 LOT 7 CON III E

WELL NAME PPC/RAM 20 Dover 3-7-III E PERMIT 7321 INIT CLASS NPW

OPERATOR PPC Oil and Gas Corp. TARGET ORD CUR STATUS GP

DRILLING DATA

CONTRACTOR Corunna Drilling Services
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 180.4
BOT LOGGER 1157.2
ROTRY TOP 3.7 DRILLER 1157.0
BOT 1157.0 DEEP END
DRLG FLD PLUG BK 1011.0

DATES

PERMIT 1988-05-31
SPUD 1988-05-31
COMPTD 1988-06-10
OFFCNF 1989-06-10
WRKOVR
ABNDND

COORDINATES

NORTH m
SOUTH 563.0 m
EAST 138.5 m
WEST m
LAT 42 22 10
LONG 82 19 27

SAMPLES

TOP 104.0
BOT 1157.0
TRAY 9515-16

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
298	42.9	104.5	CEM	0
219	35.7	602.0	CEM	0
139	22.7	1157.0	CEM	0

COMPLETION DATA

GAS 20.1 $10^3 m^3/d$
OIL m^3/d
SIP 7584.3 kPa
FORM Cobourg
INTRVL 888.0-894.0 m
899.0-901.0 m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
10.0 – 1157.0	GRNL	SCH
602.0 – 1157.0	LDT	"
602.0 – 1157.0	PEF	"
602.0 – 1156.0	DLLM	"
602.0 – 1153.0	SONL	"
850.0 – 1150.0	ELPR	"
575.0 – 1077.2	CBND	AtlasWireline

PERF ☒ OPEN HOLE ☐

REMARKS

A-2 Shale at 484.2

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	ANAL
–			
–			
–			
–			
–			
–			

CCL run over interval
850.0-919.8 AtlasWireln

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / [illegible]	0.0		
DRIFT [illegible]	3.7		
DEVONIAN: PORT LAMBTON			
KETTLE POINT	23.6		
HAMILTON	33.6		
MARCELLUS			
DUNDEE	93.2		
COLUMBUS	134.0		
LUCAS	143.0		
AMHERSTBURG	180.0		
SYLVANIA			
BOIS BLANC	233.0		
SPRINGVALE			
ORISKANY			
SILURIAN: BASS ISLANDS	269.0		
G SHALE	312.4		
F SHALE	319.1		
F SALT			
E CARBONATE	363.3		
D SALT/EQUIVALENT			
C SHALE	392.8		
B MARKER	411.4		
B EQUIVALENT	417.0		
B SALT	425.4		
B ANHYDRITE			
A2 CARBONATE	460.2		
A2 SALT			

A2 ANHYDRITE	490.6		
A1 CARBONATE	493.1		
A1 SALT			
A1 ANHYDRITE			
SILURIAN: GUELPH	504.7		
ERAMOSA			
GOAT ISLAND	528.7		
GASPORT/WIARTON	579.3		
DECEW			
ROCHESTER	588.8		
IRONDEQUOIT			
REYNALES/FOSSIL HILL	596.2		
THOROLD			
GRIMSBY			
CABOT HEAD	597.8		
MANITOULIN	633.4		
WHIRLPOOL			
ORDOVICIAN: QUEENSTON	646.7		
BLUE MOUNTAIN - GEORG. BAY	740.3		
COLLINGWOOD			
COBOURG	866.1		
VERULAM	904.2		
KIRKFIELD	946.2		
COBOCONK	988.8		
GULL RIVER	1019.3		
SHADOW LAKE	1132.5		
CAMBRIAN			
PRECAMBRIAN	1137.0		

GEOLOGY BY: T.R. Carter

CTY Kent TWP Dover BLK TRAC 4 LOT 14 CON III E

WELL NAME PPC #11 Dover 4-14-III E PERMIT 7214 INIT CLASS NPW

OPERATOR PPC Oil and Gas Corp. TARGET ORD CUR STATUS GS-ABD

DRILLING DATA

CONTRACTOR Corunna Drilling Ltd
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 181.5
BOT LOGGER 1182.2
ROTRY TOP 3.7 DRILLER 1182.2
BOT 1182.2 DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1987-12-23
SPUD 1988-01-26
COMPTD 1988-02-06
OFFCNF 1989-02-06
WRKOVR
ABNDND 1990-06-26

COORDINATES

NORTH m
SOUTH 563.9 m
EAST m
WEST 106.7 m
LAT 42 23 53
LONG 82 16 53

SAMPLES

TOP 113
BOT 1183
TRAY 9421-22

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
881 – 884	Show	NA
971 –	Show	NA
1008 – 1010.5	Show	NA
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
298	62.5	114	CEM	0
219	35.7	612	CEM	0

COMPLETION DATA

GAS $10^3 m^3/d$
OIL m^3/d
SIP kPa
FORM
INTRVL m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
0.0 – 1177.0	SONL	SCH
875.0 – 1165.0	CBLK	"
611.5 – 1181.5	NGRS	"
611.5 – 1181.5	GRNL	"
611.5 – 1181.5	DLLM	"
611.5 – 1181.5	LDT	"
611.5 – 1181.5	PEF	"

PERF ☐ OPEN HOLE ☐

REMARKS

A-2 Shale at 490.3

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
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CORING RECORD

INTERVAL	LOCATION	NO	ANAL
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GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / [illegible]	0.0		
DRIFT [illegible]	3.7		
DEVONIAN: PORT LAMBTON			
KETTLE POINT			
HAMILTON	113.0		
MARCELLUS			
DUNDEE	129.1		
COLUMBUS			
LUCAS	155.0		
AMHERSTBURG			
SYLVANIA			
BOIS BLANC	266.0		
SPRINGVALE			
ORISKANY			
SILURIAN: BASS ISLANDS	293.0		
G SHALE	354.5		
F SHALE	361.1		
F SALT			
E CARBONATE	405.3		
D SALT/EQUIVALENT			
C SHALE	432.7		
B MARKER	448.4		
B EQUIVALENT	454.7		
B SALT			
B ANHYDRITE	463.1		
A2 CARBONATE	469.3		
A2 SALT			

A2 ANHYDRITE	497.0		
A1 CARBONATE	499.3		
A1 SALT			
A1 ANHYDRITE			
SILURIAN: GUELPH	514.2		
ERAMOSA			
GOAT ISLAND	536.6		
GASPORT/WIARTON	581.0		
DECEW			
ROCHESTER	593.8		
IRONDEQUOIT			
REYNALES/FOSSIL HILL	601.9		
THOROLD			
GRIMSBY			
CABOT HEAD	603.4		
MANITOULIN	639.6		
WHIRLPOOL			
ORDOVICIAN: QUEENSTON	653.3		
BLUE MOUNTAIN - GEORG. BAY	750.9		
COLLINGWOOD			
COBOURG	883.7		
VERULAM	922.9		
KIRKFIELD	966.1		
COBOCONK	1010.8		
GULL RIVER	1042.9		
SHADOW LAKE	1153.2		
CAMBRIAN	1156.5		
PRECAMBRIAN	1159.0		

GEOLOGY BY: T.R. Carter

CTY Kent TWP Dover BLK TRAC 1 LOT 16 CON III E

WELL NAME PPC/RAM 17 Dover 1-16-III E PERMIT 7327 INIT CLASS NPW

OPERATOR PPC Oil and Gas Corp. TARGET ORD CUR STATUS DH-ABD

DRILLING DATA

CONTRACTOR Corunna Drilling Ltd
RIG TYPE Rotary
CABLE TOP
BOT
ROTRY TOP 3.6
BOT 1184.5
DRLG FLD

DEPTHS
KB ELEV 181.4
LOGGER 1184.3
DRILLER 1184.5
DEEP END
PLUG BK

DATES

PERMIT 1988-06-14
SPUD 1988-06-14
COMPTD 1988-06-23
OFFCNF 1989-06-23
WRKOVR
ABNDND 1990-06-14

COORDINATES

NORTH m
SOUTH 175.3 m
EAST m
WEST 149.0 m
LAT 42 24 28
LONG 82 16 25.5

SAMPLES

TOP 119.0
BOT 1184.0
TRAY 9483-84

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
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CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
298	42.9	119.0	CEM	0
219	35.7	626.0	CEM	0

COMPLETION DATA

GAS $10^3 m^3/d$
OIL m^3/d
SIP kPa
FORM
INTRVL m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
5.0 – 1183.3	GRNL	SCH
650.0 – 1183.3	DLT	"
650.0 – 1183.3	PEF	"
626.0 – 1180.0	SONL	"
626.0 – 1183.3	DLLM	"
–		
–		

PERF ☐ OPEN HOLE ☐

REMARKS

DST #1 - Interval was 1026.0-1041.0

A-2 Shale at 506.3

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	MM
–			
–			
–			
–			
–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
DEVONIAN	KB / KAMBORMEX	0.0		
DEVONIAN	DRIFT / KAMBORTOCK	3.6		
DEVONIAN	PORT LAMBTON			
DEVONIAN	KETTLE POINT	23.9		
DEVONIAN	HAMILTON	48.0		
DEVONIAN	MARCELLUS			
DEVONIAN	DUNDEE	111.5		
DEVONIAN	COLUMBUS	146.0		
DEVONIAN	LUCAS	153.0		
DEVONIAN	AMHERSTBURG			
DEVONIAN	SYLVANIA			
DEVONIAN	BOIS BLANC	248.0		
DEVONIAN	SPRINGVALE			
DEVONIAN	ORISKANY			
SILURIAN	BASS ISLANDS	276.0		
SILURIAN	G SHALE	364.1		
SILURIAN	F SHALE	372.0		
SILURIAN	F SALT			
SILURIAN	E CARBONATE	417.0		
SILURIAN	D SALT/EQUIVALENT			
SILURIAN	C SHALE	444.9		
SILURIAN	B MARKER	465.3		
SILURIAN	B EQUIVALENT	471.3		
SILURIAN	B SALT			
SILURIAN	B ANHYDRITE	480.0		
SILURIAN	A2 CARBONATE	485.0		
SILURIAN	A2 SALT			
SILURIAN	A2 ANHYDRITE	513.2		
SILURIAN	A1 CARBONATE	515.2		
SILURIAN	A1 SALT			
SILURIAN	A1 ANHYDRITE			
SILURIAN	GUELPH	529.2		
SILURIAN	ERAMOSA			
SILURIAN	GOAT ISLAND	555.3		
SILURIAN	GASPORT/WIARTON	598.5		
SILURIAN	DECEW			
SILURIAN	ROCHESTER	611.9		
SILURIAN	IRONDEQUOIT			
SILURIAN	REYNALES/FOSSIL HILL	618.9		
SILURIAN	THOROLD			
SILURIAN	GRIMSBY			
ORDOVICIAN	CABOT HEAD	620.0		
ORDOVICIAN	MANITOULIN	657.2		
ORDOVICIAN	WHIRLPOOL			
ORDOVICIAN	QUEENSTON	670.4		
ORDOVICIAN	BLUE MOUNTAIN - GEORG BAY	767.8		
ORDOVICIAN	COLLINGWOOD			
ORDOVICIAN	COBOURG	903.2		
ORDOVICIAN	VERULAM	949.3		
ORDOVICIAN	KIRKFIELD	984.0		
ORDOVICIAN	COBOCONK	1028.5		
ORDOVICIAN	GULL RIVER	1045.6		
ORDOVICIAN	SHADOW LAKE	1155.7		
CAMBRIAN				
PRECAMBRIAN		1160.0		

GEOLOGY BY: T.R. Carter

CTY Kent TWP Dover BLK TRAC 4 LOT 24 CON VII E

WELL NAME Francisco-Pinetree Dover 4-24-VII E PERMIT 7224 INIT CLASS NPW

OPERATOR Francisco Petroleum Enterprises Ltd TARGET ORD CUR STATUS GS-ABD

DRILLING DATA

CONTRACTOR Rawlings Drilling Co. Ltd
RIG TYPE Cable
CABLE TOP 1.2
BOT 1177.8
ROTRY TOP
BOT
DRLG FLD

DEPTHS
KB ELEV 180.1
LOGGER 1177.8
DRILLER 1177.8
DEEP END
PLUG BK

DATES

PERMIT 1988-01-08
SPUD 1988-02-01
COMPTD 1988-05-25
OFFCNF 1989-05-25
WRKOVR
ABNDND 1988-06-08

COORDINATES

NORTH m
SOUTH 444.6 m
EAST m
WEST 111.0 m
LAT 42 23 03
LONG 82 15 58

SAMPLES

TOP 19.8
BOT 1173.5
TRAY 9279-80

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
48.8 – 50.3	Show	NA
53.3 – 54.6	Show	NA
1157.3 – 1160.4	Show	517.1
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
339.7	NA	21.0	SHO	21.0
273.1	NA	117.3	SHO	117.3
219.1	35.7	352.0	PAC	342.0
177.8	29.8	645.6	CEM	580.6

COMPLETION DATA

GAS $10^3 m^3/d$
OIL m^3/d
SIP kPa
FORM
INTRVL m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
0.0 – 1177.8	GRNL	CMPL
–		
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–		

PERF ☐ OPEN HOLE ☐

REMARKS

A-2 Shale at 514.0

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
158.5 –	NA	SUL
526.7 –	NA	SUL
546.8 – 565.1	NA	SAL
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	MM
–			
–			
–			
–			
–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
DEVONIAN	KB / KAMBORMEX	0.0		
DEVONIAN	DRIFT / KAMBORTOCK	1.2		
DEVONIAN	PORT LAMBTON			
DEVONIAN	KETTLE POINT	19.8		
DEVONIAN	HAMILTON	43.0		
DEVONIAN	MARCELLUS			
DEVONIAN	DUNDEE	115.0		
DEVONIAN	COLUMBUS	148.0		
DEVONIAN	LUCAS	153.5		
DEVONIAN	AMHERSTBURG	186.8		
DEVONIAN	SYLVANIA			
DEVONIAN	BOIS BLANC	250.5		
DEVONIAN	SPRINGVALE			
DEVONIAN	ORISKANY			
SILURIAN	BASS ISLANDS	275.0		
SILURIAN	G SHALE	345.0		
SILURIAN	F SHALE	352.5		
SILURIAN	F SALT			
SILURIAN	E CARBONATE	397.5		
SILURIAN	D SALT/EQUIVALENT			
SILURIAN	C SHALE	427.0		
SILURIAN	B MARKER	436.0		
SILURIAN	B EQUIVALENT	444.0		
SILURIAN	B SALT	454.2		
SILURIAN	B ANHYDRITE			
SILURIAN	A2 CARBONATE	482.5		
SILURIAN	A2 SALT			
SILURIAN	A2 ANHYDRITE	522.0		
SILURIAN	A1 CARBONATE	524.0		
SILURIAN	A1 SALT			
SILURIAN	A1 ANHYDRITE	557.0		
SILURIAN	GUELPH	562.1		
SILURIAN	ERAMOSA			
SILURIAN	GOAT ISLAND			
SILURIAN	GASPORT/WIARTON	591.0		
SILURIAN	DECEW			
SILURIAN	ROCHESTER	611.5		
SILURIAN	IRONDEQUOIT			
SILURIAN	REYNALES/FOSSIL HILL	616.0		
SILURIAN	THOROLD			
SILURIAN	GRIMSBY			
ORDOVICIAN	CABOT HEAD	618.0		
ORDOVICIAN	MANITOULIN	654.5		
ORDOVICIAN	WHIRLPOOL			
ORDOVICIAN	QUEENSTON	662.0		
ORDOVICIAN	BLUE MOUNTAIN - GEORG BAY	774.5		
ORDOVICIAN	COLLINGWOOD			
ORDOVICIAN	COBOURG	894.0		
ORDOVICIAN	VERULAM	937.9		
ORDOVICIAN	KIRKFIELD	978.4		
ORDOVICIAN	COBOCONK	1025.3		
ORDOVICIAN	GULL RIVER	1058.0		
ORDOVICIAN	SHADOW LAKE	1167.1		
CAMBRIAN				
PRECAMBRIAN		1169.5		

GEOLOGY BY: T.R. Carter

T.R. Carter

CTY Kent TWP Harwich BLK TRAC 1-5 LOT 24 CON IV RTS
WELL NAME PPC et al Northwood 2 Harwich 1-5-24-IV RTS PERMIT 7396 INIT CLASS NPW
OPERATOR PPC Oil and Gas Corp. TARGET DEV CUR STATUS BD-ABD

DRILLING DATA

CONTRACTOR Eagle Drilling Services
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 190.5
BOT LOGGER 165.0
ROTRY TOP 2.5 DRILLER 165.7
BOT 165.7 DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-09-13
SPUD 1988-09-13
COMPTD 1988-09-14
OFFCNF 1989-09-14
WRKOVR
ABNDND 1989-05-01

COORDINATES

NORTH 567.0 m
SOUTH m
EAST m
WEST 61.0 m
LAT 42 23 49
LONG 82 01 50

SAMPLES

TOP 38.0
BOT 165.0
TRAY 6961

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
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–		
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CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
178	34.0	38.0	CEM	0

COMPLETION DATA

GAS $10^3 m^3/d$
OIL m^3/d
SIP kPa
FORM
INTRVL m
m
m
PERF ☐ OPEN HOLE ☐

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
6.0 – 164.3	GRNL	SCH
–		
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–		
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–		

REMARKS

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
148.0 – 155.0	NA	SUL
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB /LAKE LEVEL	0.0		
DRIFT /LAKE BEDROCK	2.5		
DEVONIAN: PORT LAMBTON			
DEVONIAN: KETTLE POINT	26.5		
DEVONIAN: HAMILTON	33.8		
DEVONIAN: MARCELLUS			
DEVONIAN: DUNDEE	108.7		
DEVONIAN: COLUMBUS	146.5		
DEVONIAN: LUCAS	152.0		
DEVONIAN: AMHERSTBURG			
DEVONIAN: SYLVANIA			
DEVONIAN: BOIS BLANC			
DEVONIAN: SPRINGVALE			
DEVONIAN: ORISKANY			
SILURIAN: BASS ISLANDS			
SILURIAN: G SHALE			
SILURIAN: F SHALE			
SILURIAN: F SALT			
SILURIAN: E CARBONATE			
SILURIAN: D SALT/EQUIVALENT			
SILURIAN: C SHALE			
SILURIAN: B MARKER			
SILURIAN: B EQUIVALENT			
SILURIAN: B SALT			
SILURIAN: B ANHYDRITE			
SILURIAN: A2 CARBONATE			
SILURIAN: A2 SALT			
SILURIAN: A2 ANHYDRITE			
SILURIAN: A1 CARBONATE			
SILURIAN: A1 SALT			
SILURIAN: A1 ANHYDRITE			
SILURIAN: GUELPH			
SILURIAN: ERAMOSA			
SILURIAN: GOAT ISLAND			
SILURIAN: GASPORT/WIARTON			
SILURIAN: DECEW			
SILURIAN: ROCHESTER			
SILURIAN: IRONDEQUOIT			
SILURIAN: REYNALES/FOSSIL HILL			
SILURIAN: THOROLD			
SILURIAN: GRIMSBY			
SILURIAN: CABOT HEAD			
SILURIAN: MANITOULIN			
SILURIAN: WHIRLPOOL			
ORDOVICIAN: QUEENSTON			
ORDOVICIAN: BLUE MOUNTAIN - GEORG. BAY			
ORDOVICIAN: COLLINGWOOD			
ORDOVICIAN: COBOURG			
ORDOVICIAN: VERULAM			
ORDOVICIAN: KIRKFIELD			
ORDOVICIAN: COBOCONK			
ORDOVICIAN: GULL RIVER			
ORDOVICIAN: SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Kent TWP Howard BLK TRAC 1 LOT 96 CON II STR BF
WELL NAME Consumers 34380 Howard 1-96-II STR BF PERMIT 7273 INIT CLASS BD
OPERATOR The Consumers Gas Co. Ltd TARGET SAL CUR STATUS BD-SUS

DRILLING DATA

CONTRACTOR Eagle Drilling Services Inc
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 185.5
BOT LOGGER 382.2
ROTRY TOP 2.5 DRILLER 382.2
BOT 382.2 DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-04-26
SPUD 1988-05-02
COMPTD 1988-05-10
OFFCNF 1988-06-09
WRKOVR
ABNDND

COORDINATES

NORTH m
SOUTH 138.6 m
EAST 31.4 m
WEST m
LAT 42 21 56.5
LONG 81 50 34

SAMPLES

TOP 52.0
BOT 382.0
TRAY 7418

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
178	29.8	142	CEM	0

COMPLETION DATA

GAS $10^3 m^3/d$
OIL m^3/d
SIP kPa
FORM
INTRVL m
m
m
PERF ☐ OPEN HOLE ☐

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
140.0 – 381.5	DENL	CMPL
0.0 – 382.0	GRNL	"
–		
–		
–		
–		

REMARKS

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB /LAKE LEVEL	0.0		
DRIFT /LAKE BEDROCK	2.5		
DEVONIAN: PORT LAMBTON			
DEVONIAN: KETTLE POINT	32.0		
DEVONIAN: HAMILTON	77.0		
DEVONIAN: MARCELLUS			
DEVONIAN: DUNDEE	152.3		
DEVONIAN: COLUMBUS			
DEVONIAN: LUCAS	222.0		
DEVONIAN: AMHERSTBURG	235.0		
DEVONIAN: SYLVANIA			
DEVONIAN: BOIS BLANC	289.0		
DEVONIAN: SPRINGVALE			
DEVONIAN: ORISKANY			
SILURIAN: BASS ISLANDS	311.0		
SILURIAN: G SHALE			
SILURIAN: F SHALE			
SILURIAN: F SALT			
SILURIAN: E CARBONATE			
SILURIAN: D SALT/EQUIVALENT			
SILURIAN: C SHALE			
SILURIAN: B MARKER			
SILURIAN: B EQUIVALENT			
SILURIAN: B SALT			
SILURIAN: B ANHYDRITE			
SILURIAN: A2 CARBONATE			
SILURIAN: A2 SALT			
SILURIAN: A2 ANHYDRITE			
SILURIAN: A1 CARBONATE			
SILURIAN: A1 SALT			
SILURIAN: A1 ANHYDRITE			
SILURIAN: GUELPH			
SILURIAN: ERAMOSA			
SILURIAN: GOAT ISLAND			
SILURIAN: GASPORT/WIARTON			
SILURIAN: DECEW			
SILURIAN: ROCHESTER			
SILURIAN: IRONDEQUOIT			
SILURIAN: REYNALES/FOSSIL HILL			
SILURIAN: THOROLD			
SILURIAN: GRIMSBY			
SILURIAN: CABOT HEAD			
SILURIAN: MANITOULIN			
SILURIAN: WHIRLPOOL			
ORDOVICIAN: QUEENSTON			
ORDOVICIAN: BLUE MOUNTAIN - GEORG. BAY			
ORDOVICIAN: COLLINGWOOD			
ORDOVICIAN: COBOURG			
ORDOVICIAN: VERULAM			
ORDOVICIAN: KIRKFIELD			
ORDOVICIAN: COBOCONK			
ORDOVICIAN: GULL RIVER			
ORDOVICIAN: SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Kent TWP Raleigh BLK TRAC 3 LOT 14 CON XIII

WELL NAME Ram BP #5 Raleigh 3-14-XIII PERMIT 7413 INIT CLASS NPW

OPERATOR Ram Petroleum Limited TARGET ORD CUR STATUS OSGS-ABD

DRILLING DATA

CONTRACTOR Corunna Rotary Drilling
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 196.9
BOT LOGGER 1197.8
ROTRY TOP 3.7 DRILLER 1203.0
BOT 1203.0 DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-10-27
SPUD 1988-10-27
COMPTD 1988-11-08
OFFCNF 1989-11-08
WRKOVR
ABNDND 1988-12-03

COORDINATES

NORTH m
SOUTH 500.0 m
EAST 297.3 m
WEST m
LAT 42 16 45
LONG 82 08 30

SAMPLES

TOP 63.0
BOT 1203.0
TRAY 9379-
80

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
884.0 – 924.0	Show	NA
936.0 –	Show	NA
1010.0 –	Show	NA
1063.0 – 1064.0	Show	NA
1046.0, 1177.0	Show	NA
1143.0, 1155.0	Show	NA

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
299	62.5	63.0	CEM	0
219	35.7	608.0	CEM	96.0

COMPLETION DATA

GAS $10^3 m^3/d$
OIL m^3/d
SIP kPa
FORM
INTRVL m
m
m
PERF ☐ OPEN HOLE ☐

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
1046.0 –	Show	NA
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
608.0 – 1197.0	GRNL	SCH
608.0 – 1197.0	LDT	SCH
608.0 – 1197.0	PEF	SCH
608.0 – 1197.5	SONL	SCH
608.0 – 1197.5	DLLM	SCH
–		

REMARKS

DST #1 - Interval was
1068.0-1083.0
DST #2 - Interval was
1151-1174.0

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	rec
–			
–			
–			
–			
–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / [illegible]	0.0		
	DRIFT / [illegible]	3.7		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT	44.0		
	HAMILTON	57.0		
	MARCELLUS			
	DUNDEE	108.8		
	COLUMBUS			
	LUCAS	132.0		
	AMHERSTBURG	171.0		
	SYLVANIA			
	BOIS BLANC	217.5		
	SPRINGVALE			
	ORISKANY	228.0		
SILURIAN	BASS ISLANDS	240.0		
	G SHALE	351.0		
	F SHALE	357.7		
	F SALT			
	E CARBONATE			
	D SALT/EQUIVALENT			
	C SHALE	426.8		
	B MARKER	438.8		
	B EQUIVALENT	444.5		
	B SALT			
	B ANHYDRITE	456.2		
	A2 CARBONATE	461.2		
	A2 SALT			

	A2 ANHYDRITE	480.5		
	A1 CARBONATE	483.0		
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH	497.0		
	ERAMOSA			
	GOAT ISLAND	523.5		
	GASPORT/MARTON	541.0		
	DECEW			
	ROCHESTER	590.0		
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL	599.5		
	THOROLD			
	GRIMSBY			
	CABOT HEAD	601.6		
	MANITOULIN	641.4		
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON	650.6		
	BLUE MOUNTAIN - GEORG. BAY	758.7		
	COLLINGWOOD			
	COBOURG	923.3		
	VERULAM	955.0		
	KIRKFIELD	1002.0		
	COBOCONK	1045.1		
	GULL RIVER	1079.0		
	SHADOW LAKE	1152.0		
CAMBRIAN		1152.8		
PRECAMBRIAN		1185.4		

GEOLOGY BY: T.R. Carter

CTY Kent TWP Raleigh BLK TRAC 2 LOT 14 CON XIV

WELL NAME Ram BP #4 Raleigh 2-14-XIV PERMIT 7357 INIT CLASS NPW

OPERATOR Ram Petroleum Ltd TARGET ORD CUR STATUS GP

DRILLING DATA

CONTRACTOR Corunna Drilling Ltd
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 198.2
BOT LOGGER 1208.2
ROTRY TOP 3.7 DRILLER 1208.0
BOT 1208.0 DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-07-15
SPUD 1988-07-21
COMPTD 1988-08-04
OFFCNF 1989-08-04
WRKOVR
ABNDND

COORDINATES

NORTH m
SOUTH 190.0 m
EAST 186.5 m
WEST m
LAT 42 16 17 "
LONG 82 06 01

SAMPLES

TOP 61.0
BOT 1206.0
TRAY 9373-
74

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
116 –		
923 – 925		
1018 –		
1029 –		
1171.5 –		
1176 –		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
298	62.5	60.9	CEM	0
219	35.7	579.5	CEM	0
140	20.8	1206.1	CEM	0

COMPLETION DATA

GAS 4.6 $10^3 m^3/d$
OIL m^3/d
SIP 4805 kPa
FORM Cobourg
INTRVL 921.0-927.5 m
m
m
PERF ☐ OPEN HOLE ☐

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
579.5 – 1207.2	CNL	SCH
579.5 – 1207.2	LDT	"
23.0 – 1204.5	SONL	"
579.5 – 1207.2	MSFL	"
579.5 – 1207.2	LATL	"
900.0 – 1203.8	ELPR	
1163.6 – 1207.9	FMS	

REMARKS

More gas shows at
1179, 1185m

More logs:
907.4-966- FMS
772.0-1188.5-CBND
900.0-1200.0-CBLK

Gas Analysis
DST #1 from 918.0-938.0

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	rec
–			
–			
–			
–			
–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / [illegible]	0.0		
	DRIFT / [illegible]	3.7		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT	46.7		
	HAMILTON	58.5		
	MARCELLUS			
	DUNDEE	112.1		
	COLUMBUS			
	LUCAS	158.0		
	AMHERSTBURG	189.0		
	SYLVANIA			
	BOIS BLANC	223.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	226.0		
	G SHALE	355.1		
	F SHALE	361.8		
	F SALT			
	E CARBONATE	406.0		
	D SALT/EQUIVALENT			
	C SHALE	432.4		
	B MARKER	447.9		
	B EQUIVALENT	453.5		
	B SALT			
	B ANHYDRITE	462.7		
	A2 CARBONATE	468.0		
	A2 SALT			

	A2 ANHYDRITE			
	A1 CARBONATE	490.8		
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH	507.5		
	ERAMOSA			
	GOAT ISLAND	527.4		
	GASPORT/MARTON	549.4		
	DECEW			
	ROCHESTER	595.8		
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL	605.1		
	THOROLD			
	GRIMSBY			
	CABOT HEAD	607.5		
	MANITOULIN	647.4		
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON	656.5		
	BLUE MOUNTAIN - GEORG. BAY	761.8		
	COLLINGWOOD			
	COBOURG	913.0		
	VERULAM	938.0		
	KIRKFIELD	978.7		
	COBOCONK	1017.7		
	GULL RIVER	1051.8		
	SHADOW LAKE	1167.6		
CAMBRIAN		1168.5		
PRECAMBRIAN		1197.2		

GEOLOGY BY: T.R. Carter

T.R. Carter

CTY Kent TWP Raleigh BLK TRAC 1 LOT 17 CON XIII

WELL NAME Ram BP #5 Raleigh 1-17-XIII PERMIT 7369 INIT CLASS NPW

OPERATOR Ram Petroleum Ltd TARGET ORD CUR STATUS GPOS-SUS.

DRILLING DATA

CONTRACTOR Corunna Rotary Drilling
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 197.2
BOT LOGGER 1183.0
ROTRY TOP 3.7 DRILLER 1186.0
BOT 1186.0 DEEP END
DRLG FLD PLUG BK 1165.0

DATES

PERMIT 1988-08-05
SPUD 1988-08-08
COMPTD 1988-08-20
OFFCNF 1989-08-20
WRKOVR 1989-03-08
ABNDND

COORDINATES

NORTH m
SOUTH 122.0 m
EAST m
WEST 194.0 m
LAT 42 16 17
LONG 82 08 01

SAMPLES

TOP 66.0
BOT 1186.0
TRAY 9508-09

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
83.0 –	Show	NA
796.0 – 884.0	Show	NA
890.0 –	Show	NA
1004.0 –	Show	NA
1154.0 – 1158.0	Show	NA
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
298	62.5	66.5	CEM	0
219	35.7	579.0	CEM	0
140	20.8	1182.6	CEM	0

COMPLETION DATA

GAS $10^3m^3/d$
OIL m^3/d
SIP kPa
FORM Cambrian
INTRVL 1155.5-1157.5 m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
1168.0 –	Show	NA
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
579.5 – 1182.0	GRNL	SCH
579.5 – 1182.0	LDT	"
579.5 – 1182.0	PEF	"
17.0 – 1179.6	SONL	"
579.5 – 1177.0	DLLM	"
579.5 – 1176.0	ELPR	"
850.0 – 1178.2	GRNL	CMPL

PERF ☒ OPEN HOLE ☐

REMARKS

DST #1 from 1147.1-1174.2
DST #2 1152.1-1159.2
A-2 Shale at 467.4
Core Analysis
Oil Analysis
Condensate Analysis

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	MM
1160.0 – 1175.8	PRL	986	yes
–			
–			
–			
–			

Computalog Logs Cont.
CBND - 850.0-1177.0
CMPL - 1075.0-1174.1

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / ~~KELLY BUSHING~~	0.0		
	DRIFT / ~~LAKE BOTTOM~~	3.7		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON	57.5		
	MARCELLUS			
	DUNDEE	80.3		
	COLUMBUS			
	LUCAS	126.0		
	AMHERSTBURG	150.0		
	SYLVANIA			
	BOIS BLANC	196.0		
	SPRINGVALE			
	ORISKANY	205.0		
SILURIAN	BASS ISLANDS	246.5		
	G SHALE	327.9		
	F SHALE	335.0		
	F SALT			
	E CARBONATE	382.0		
	D SALT/EQUIVALENT			
	C SHALE	409.2		
	B MARKER			
	B EQUIVALENT			
	B SALT			
	B ANHYDRITE			
	A2 CARBONATE	448.6		
	A2 SALT			
SILURIAN	A2 ANHYDRITE	470.4		
	A1 CARBONATE	472.3		
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH	499.3		
	ERAMOSA			
	GOAT ISLAND	510.1		
	GASPORT/MARTON			
	DECEW			
	ROCHESTER	568.8		
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL	577.5		
	THOROLD			
	GRIMSBY			
	CABOT HEAD	579.5		
	MANITOULIN	613.2		
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON	626.4		
	BLUE MOUNTAIN - GEORG BAY	720.7		
	COLLINGWOOD			
	COBOURG	884.3		
	VERULAM	918.3		
	KIRKFIELD	962.8		
	COBOCONK	1005.0		
	GULL RIVER	1039.0		
	SHADOW LAKE	1150.7		
	CAMBRIAN	1151.7		
	PRECAMBRIAN	1168.8		

GEOLOGY BY: T.R. Carter

CTY Kent TWP Raleigh BLK TRAC 6 LOT 19 CON XI

WELL NAME Cons. P.S.J. 34512 Raleigh 6-19-XI PERMIT 7419 INIT CLASS NPW

OPERATOR The Consumers Gas Co. Ltd TARGET ORD CUR STATUS DH-ABD

DRILLING DATA

CONTRACTOR Underwater Gas Developers
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 193.4
BOT LOGGER 1184.8
ROTRY TOP 4.8 DRILLER 1186.0
BOT 1186.0 DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-11-14
SPUD 1988-11-17
COMPTD 1988-11-27
OFFCNF 1989-11-27
WRKOVR
ABNDND 1988-11-28

COORDINATES

NORTH 446.0 m
SOUTH m
EAST 195.0 m
WEST m
LAT 42 18 45
LONG 82 08 06

SAMPLES

TOP 186.0
BOT 1186.0
TRAY 9440-41

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244	54.0	77.9	CEM	0
178	29.0	600.2	CEM	80.0

COMPLETION DATA

GAS $10^3m^3/d$
OIL m^3/d
SIP kPa
FORM
INTRVL m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
77.4 – 1183.9	GRNL	SCH
77.4 – 1183.9	LDT	"
77.4 – 1183.9	PEF	"
11.0 – 1179.5	SONL	"
600.0 – 1180.3	DLLM	"
–		
–		

PERF ☐ OPEN HOLE ☐

REMARKS

A-2 Shale at 470.1

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	MM
–			
–			
–			
–			
–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / ~~KELLY BUSHING~~	0.0		
	DRIFT / ~~LAKE BOTTOM~~	4.8		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON	47.0		
	MARCELLUS			
	DUNDEE	85.0		
	COLUMBUS			
	LUCAS	138.0		
	AMHERSTBURG	175.0		
	SYLVANIA			
	BOIS BLANC	219.0		
	SPRINGVALE			
	ORISKANY	237.0		
SILURIAN	BASS ISLANDS	243.6		
	G SHALE	319.0		
	F SHALE	327.4		
	F SALT			
	E CARBONATE	373.0		
	D SALT/EQUIVALENT			
	C SHALE	402.1		
	B MARKER	415.1		
	B EQUIVALENT	420.3		
	B SALT	430.0		
	B ANHYDRITE	446.1		
	A2 CARBONATE	448.3		
	A2 SALT			
SILURIAN	A2 ANHYDRITE	471.1		
	A1 CARBONATE	473.5		
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH	493.8		
	ERAMOSA			
	GOAT ISLAND	506.5		
	GASPORT/MARTON	556.6		
	DECEW			
	ROCHESTER	569.0		
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL	578.3		
	THOROLD			
	GRIMSBY			
	CABOT HEAD	580.0		
	MANITOULIN	614.0		
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON	628.0		
	BLUE MOUNTAIN - GEORG BAY	724.8		
	COLLINGWOOD			
	COBOURG	889.4		
	VERULAM	923.6		
	KIRKFIELD	963.3		
	COBOCONK	1005.9		
	GULL RIVER	1040.8		
	SHADOW LAKE	1151.5		
	CAMBRIAN	1153.0		
	PRECAMBRIAN	1168.8		

GEOLOGY BY: T.R. Carter

CTY	Kent	TWP	Romney	BLK		TRAC	1	LOT	7	CON II
WELL NAME	Cons. et al 3416] Romney 1-7-II				PERMIT	7272		INIT CLASS		DEV
OPERATOR	The Consumers Gas Co. Ltd				TARGET	ORD		CUR STATUS		OPGS-SUS

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	Underwater Gas Developers Ltd			PERMIT	1988-04-25	NORTH		m	TOP	6.0
RIG TYPE	Rotary	DEPTHS		SPUD	1988-06-15	SOUTH	280.0	m	BOT	923.7
CABLE TOP		KB ELEV	189.2	COMPTD	1988-06-22	EAST		m	TRAY	9520-
BOT		LOGGER	923.5	OFFCNF	1988-07-22	WEST	160.0	m		21
ROTRY TOP	4.8	DRILLER	923.0	WRKOVR		LAT	42 06 25			
BOT	923.0	DEEP END		ABNOND		LONG	82 27 14.5			
DRLG FLD		PLUG BK	911.0							

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS	Show 10³m³/d
810.0 – 852.0	Show	NA	244	54.0	63.1	CEM	0	OIL	Show m³/d
854.0 – 882.0	Show	NA	178	29.8	514.0	CEM	0	SIP	NA kPa
–			114	14.8	920.7	CEM	0	FORM	Verulam/Kirkfield
–			60	7.0	848.2	HAN	0	INTRVL	819.0-834.0 m
–									846.0-847.5 m
–									869.5-873.0 m

INITIAL OIL RECORD			LOGGING RECORD			PERF ☒	OPEN HOLE ☐
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	REMARKS	
805.0 –	Show	NA	10.0 – 922.6	DLLM	SCH	DST #1 - 854.0-882.0	
–			5.0 – 922.6	SONL	"	DST #2 - 810.0-852.0	
–			28.0 – 922.6	CRNL	"		
–			500.0 – 922.6	PEF	"		
–			500.0 – 922.6	LDT	"	Gas Analysis	
–			500.0 – 890.5	CBVD	"	Oil Analysis	
			500.0 – 891.0	CBHD	"		

INITIAL WATER RECORD			CORING RECORD				
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	cm	
94.0 –	NA	NA	–				
152.0 –	NA	NA	–				
192.0 –	NA	NA	–				
–			–				
–			–				CHPL was 770.0-888.0 SCH
–			–				

GEOLOGICAL CONTACTS		TOP	ELEV	THICK
	KB /XXXXXXXXX	0.0		
	DRIFT /XXXXXXXXX	4.8		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON			
	MARCELLUS			
	DUNDEE	38.3		
	COLUMBUS			
	LUCAS	74.0		
	AMHERSTBURG	104.0		
	SYLVANIA			
	BOIS BLANC			
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	130.0	.	
	G SHALE	230.5		
	F SHALE	238.7		
	F SALT			
	E CARBONATE	279.8		
	D SALT/EQUIVALENT			
	C SHALE	309.1		
	B MARKER	322.1		
	B EQUIVALENT	327.0		
	B SALT			
	B ANHYDRITE			
	A2 CARBONATE	345.9		
	A2 SALT			

SILURIAN	A2 ANHYDRITE	365.4		
	A1 CARBONATE	372.3		
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH	380.0		
	ERAMOSA			
	GOAT ISLAND	424.8		
	GASPORT/MARTON	489.3		
	DECEW			
	ROCHESTER	495.3		
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL	502.2		
	THOROLD			
	GRIMSBY			
	CABOT HEAD	505.0		
	MANITOULIN	544.0		
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON	553.8		
	BLUE MOUNTAIN - GEORG BAY	643.5		
	COLLINGWOOD			
	COBOURG	796.5		
	VERULAM	816.0		
	KIRKFIELD	860.8		
	COBOCONK	902.3		
	GULL RIVER			
	SHADOW LAKE			
	CAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY	Kent	TWP	Romney	BLK		TRAC	7	LOT	9	CON II
WELL NAME	Farmers 1 Romney 7-9-II				PERMIT	7371		INIT CLASS		DEV
OPERATOR	Farmers Oil and Gas Inc.				TARGET	ORD		CUR STATUS		OP-GS

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	Eagle Drilling Services			PERMIT	1988-08-08	NORTH	311.5	m	TOP	43.0
RIG TYPE	Rotary	DEPTHS		SPUD	1988-08-24	SOUTH		m	BOT	843.1
CABLE TOP	810.0	KB ELEV	186.9	COMPTD	1988-10-07	EAST	132.2	m	TRAY	9462-
BOT	843.7	LOGGER	840.2	OFFCNF	1988-11-06	WEST		m		63
ROTRY TOP	2.5	DRILLER	843.7	WRKOVR		LAT	42 06 27			
BOT	810.0	DEEP END		ABNOND		LONG	82 26 23			
DRLG FLD		PLUG BK								

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS	10³m³/d
822.3 –	Show	NA	244	54.0	73.7	CEM	0	OIL	m³/d
–			178	30.0	810.0	CEM	0	SIP	kPa
–			73	NA	836.6	HAN	0	FORM	
–								INTRVL	m
–									m
–									m

INITIAL OIL RECORD			LOGGING RECORD			PERF ☐	OPEN HOLE ☐
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	REMARKS	
822.3 –	Show	NA	0.0 – 809.7	CRNL	CHPL	Southwest Well Servic-	
828.0 –	Show	NA	775.0 – 840.2	DENL	"	ing drilled 810.0-843.7	
835.0 –	Show	NA	–			interval	
–			–				
–			–			A-2 Shale at 379.1	

INITIAL WATER RECORD			–				
INTERVAL	STAT LEV	TYPE	CORING RECORD				
103.0 –	NA	SUL	INTERVAL	LOCATION	NO	cm	Poor samples, Devonian
–			–				picks uncertain
–			–				
–			–				
–			–				
–			–				

GEOLOGICAL CONTACTS		TOP	ELEV	THICK
	KB /XXXXXXXXX	0.0		
	DRIFT /XXXXXXXXX	2.5		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON			
	MARCELLUS			
	DUNDEE	42.0		
	COLUMBUS			
	LUCAS	83.2?		
	AMHERSTBURG	104.0?		
	SYLVANIA			
	BOIS BLANC			
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	136.0?		
	G SHALE	236.0		
	F SHALE	244.0		
	F SALT			
	E CARBONATE	289.6		
	D SALT/EQUIVALENT			
	C SHALE	314.7		
	B MARKER	333.0		
	B EQUIVALENT	338.1		
	B SALT			
	B ANHYDRITE			
	A2 CARBONATE	361.0		
	A2 SALT			

SILURIAN	A2 ANHYDRITE	380.7		
	A1 CARBONATE	385.4		
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH	395.0		
	ERAMOSA			
	GOAT ISLAND	430.4		
	GASPORT/MARTON	491.0		
	DECEW			
	ROCHESTER	503.4		
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL	510.0		
	THOROLD			
	GRIMSBY			
	CABOT HEAD	514.0		
	MANITOULIN	553.1		
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON	563.0		
	BLUE MOUNTAIN - GEORG BAY	652.0		
	COLLINGWOOD			
	COBOURG	808.0		
	VERULAM	826.9		
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
	CAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

T.R. Carter

CTY Kent TWP Romney BLK TRAC 2 LOT 11 CON I
WELL NAME Ram et al 1 Romney 2-11-I PERMIT 7222 INIT CLASS DEV
OPERATOR Ram Petroleums Ltd TARGET ORD CUR STATUS DH-ABD

DRILLING DATA

CONTRACTOR B and S Rotary Drilling Ltd
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 184.6
BOT LOGGER 1089.2
ROTRY TOP 3.5 DRILLER 1090.0
BOT 1090.0 DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-01-06
SPUD 1988-01-07
COMPTD 1988-01-21
OFFCNF 1988-02-20
WRKOVR
ABNDND 1988-01-22

COORDINATES

NORTH m
SOUTH 190.0 m
EAST 110.0 m
WEST m
LAT 42 06 40
LONG 82 25 28

SAMPLES

TOP 54.0
BOT 1093.0
TRAY 9216-17

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
299	62.5	53.4	CEM	0
219	36.0	511.8	CEM	232.8

COMPLETION DATA

GAS $10^3m^3/d$
OIL m^3/d
SIP kPa
FORM
INTRVL m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
900.0 – 904.0	NA	NA
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
511.0 – 1089.0	DLLM	SCH
15.0 – 1085.0	SONL	"
511.0 – 1088.4	GRNL	"
511.0 – 1088.4	PEF	"
511.0 – 1088.4	LDT	"
–		
–		

PERF ☐ OPEN HOLE ☐

REMARKS

DST #1 Interval was 890.0-912.0
A-2 Shale at 370.8

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	ABA
–			
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB /[illegible]	0.0		
DRIFT /[illegible]	3.5		
DEVONIAN: PORT LAMBTON			
DEVONIAN: KETTLE POINT			
DEVONIAN: HAMILTON			
DEVONIAN: MARCELLUS			
DEVONIAN: DUNDEE	40.8		
DEVONIAN: COLUMBUS			
DEVONIAN: LUCAS	78.0		
DEVONIAN: AMHERSTBURG	104.5		
DEVONIAN: SYLVANIA			
DEVONIAN: BOIS BLANC			
DEVONIAN: SPRINGVALE			
DEVONIAN: ORISKANY			
SILURIAN: BASS ISLANDS	135.0		
SILURIAN: G SHALE	233.0		
SILURIAN: F SHALE	239.5		
SILURIAN: F SALT			
SILURIAN: E CARBONATE	282.1		
SILURIAN: D SALT/EQUIVALENT			
SILURIAN: C SHALE	311.3		
SILURIAN: B MARKER	331.4		
SILURIAN: B EQUIVALENT	336.5		
SILURIAN: B SALT			
SILURIAN: B ANHYDRITE			
SILURIAN: A2 CARBONATE	355.8		
SILURIAN: A2 SALT			
SILURIAN: A2 ANHYDRITE	372.5		
SILURIAN: A1 CARBONATE	376.8		
SILURIAN: A1 SALT			
SILURIAN: A1 ANHYDRITE			
SILURIAN: GUELPH	385.5		
SILURIAN: ERAMOSA			
SILURIAN: GOAT ISLAND	400.0		
SILURIAN: GASPORT/WIARTON	482.1		
SILURIAN: DECEW			
SILURIAN: ROCHESTER	492.3		
SILURIAN: IRONDEQUOIT			
SILURIAN: REYNALES/FOSSIL HILL	498.8		
SILURIAN: THOROLD			
SILURIAN: GRIMSBY			
SILURIAN: CABOT HEAD	502.4		
SILURIAN: MANITOULIN	541.0		
ORDOVICIAN: QUEENSTON	551.0		
ORDOVICIAN: BLUE MOUNTAIN - GEORG BAY	635.8		
ORDOVICIAN: COLLINGWOOD			
ORDOVICIAN: COBOURG	795.8		
ORDOVICIAN: VERULAM	816.0		
ORDOVICIAN: KIRKFIELD	868.1		
ORDOVICIAN: COBOCONK	901.8		
ORDOVICIAN: GULL RIVER	934.3		
ORDOVICIAN: SHADOW LAKE	1047.0		
CAMBRIAN	1048.0		
PRECAMBRIAN	1087.0		

GEOLOGY BY: T.R. Carter

CTY Kent TWP Romney BLK TRAC 1 LOT 12 CON III
WELL NAME Cons et al 34346 Romney 1-12-III PERMIT 7322 INIT CLASS NPW
OPERATOR The Consumers Gas Co. Ltd TARGET ORD CUR STATUS OPGS-SUS

DRILLING DATA

CONTRACTOR Underwater Gas Developers Ltd
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 193.5
BOT LOGGER 1101.0
ROTRY TOP 4.8 DRILLER 1101.0
BOT 1101.0 DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-06-01
SPUD 1988-06-04
COMPTD 1988-06-12
OFFCNF 1989-06-12
WRKOVR
ABNDND

COORDINATES

NORTH m
SOUTH 177.0 m
EAST m
WEST 299.0 m
LAT 42 08 05
LONG 82 26 24

SAMPLES

TOP 3.0
BOT 1100.0
TRAY 9393-94

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
835.5 –	Show	NA
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244	54.0	81.8	CEM	0
178	29.8	524.0	CEM	0
114	14.0	1099.0	CEM	0
60	7.0	849.8	HAN	0

COMPLETION DATA

GAS Show $10^3m^3/d$
OIL NA m^3/d
SIP kPa
FORM Cobourg, Verulam
INTRVL 831.0-832.0 m
832.5-843.0 m
845.0-849.5 m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
835.5 –	Show	NA
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
5.0 – 1100.0	GRNL	SCH
5.0 – 1100.0	DLLM	"
5.0 – 1097.0	SONL	"
500.0 – 1081.0	CBVD	"
520.0 – 1081.0	CBND	"
525.0 – 1100.0	PEF	"
525.0 – 1100.0	LDT	"

PERF ☒ OPEN HOLE ☐

REMARKS

DST #1 Interval was 875.0-909m
DST #2 Interval was 865.0-875.0m
Oil Analysis
Gas Analysis

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
126.0 –	NA	SUL
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	ABA
–			
–			
–			
–			
–			
–			

A-2 Shale at 389.3

CMPL Interval was 795-870.0 (SCH)

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB /[illegible]	0.0		
DRIFT /[illegible]	4.8		
DEVONIAN: PORT LAMBTON			
DEVONIAN: KETTLE POINT			
DEVONIAN: HAMILTON			
DEVONIAN: MARCELLUS			
DEVONIAN: DUNDEE	66.0		
DEVONIAN: COLUMBUS			
DEVONIAN: LUCAS	121.5		
DEVONIAN: AMHERSTBURG	139.0		
DEVONIAN: SYLVANIA			
DEVONIAN: BOIS BLANC	165.0?		
DEVONIAN: SPRINGVALE			
DEVONIAN: ORISKANY			
SILURIAN: BASS ISLANDS	201.0		
SILURIAN: G SHALE	259.8		
SILURIAN: F SHALE	266.2		
SILURIAN: F SALT			
SILURIAN: E CARBONATE	307.1		
SILURIAN: D SALT/EQUIVALENT			
SILURIAN: C SHALE	336.8		
SILURIAN: B MARKER	350.3		
SILURIAN: B EQUIVALENT	356.0		
SILURIAN: B SALT			
SILURIAN: B ANHYDRITE			
SILURIAN: A2 CARBONATE	374.0		
SILURIAN: A2 SALT			
SILURIAN: A2 ANHYDRITE	391.9		
SILURIAN: A1 CARBONATE	395.8		
SILURIAN: A1 SALT			
SILURIAN: A1 ANHYDRITE			
SILURIAN: GUELPH	405.7		
SILURIAN: ERAMOSA			
SILURIAN: GOAT ISLAND			
SILURIAN: GASPORT/WIARTON	506.0		
SILURIAN: DECEW			
SILURIAN: ROCHESTER	511.1		
SILURIAN: IRONDEQUOIT			
SILURIAN: REYNALES/FOSSIL HILL	518.0		
SILURIAN: THOROLD			
SILURIAN: GRIMSBY			
SILURIAN: CABOT HEAD	521.0		
SILURIAN: MANITOULIN	559.4		
ORDOVICIAN: QUEENSTON	569.7		
ORDOVICIAN: BLUE MOUNTAIN - GEORG BAY	659.0		
ORDOVICIAN: COLLINGWOOD			
ORDOVICIAN: COBOURG	814.6		
ORDOVICIAN: VERULAM	835.8		
ORDOVICIAN: KIRKFIELD	877.1		
ORDOVICIAN: COBOCONK	916.3		
ORDOVICIAN: GULL RIVER	947.6		
ORDOVICIAN: SHADOW LAKE	1053.6		
CAMBRIAN	1054.7		
PRECAMBRIAN	1085.5		

GEOLOGY BY: T.R. Carter

CTY	Kent	TWP	Romney	BLK	TRAC 1	LOT 13	CON II
WELL NAME	Cons et al 34350 Romney #-13-II			PERMIT	7390	INIT CLASS	DEV
OPERATOR	The Consumers Gas Co. Ltd			TARGET	ORD	CUR STATUS	OPGS

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	Underwater Gas Developers Ltd			PERMIT	1988-09-06	NORTH		m	TOP	48.0
RIG TYPE	Rotary	DEPTHS		SPUD	1988-09-09	SOUTH	228.6	m	BOT	939.0
CABLE TOP		KB ELEV	191.8	COMPTD	1988-09-17	EAST		m	TRAY	9524-
BOT		LOGGER	940.5	OFFCNF	1988-10-17	WEST	3.2	m		25
ROTRY TOP	4.8	DRILLER	940.0	WRKOVR		LAT	42 07 50			
BOT	940.0	DEEP END		ABNDND		LONG	82 25 12			
DRLG FLD		PLUG BK	936.9							

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS	$10^3m^3/d$
842.3 –	Show	NA	244	54.0	71.5	CEM	0	OIL NA	m^3/d
–			178	29.8	524.6	CEM	0	SIP NA	kPa
–			114	14.0	936.9	CEM	0	FORM Verulam	
–			60	7.0	846.7	HAN	0	INTRVL 838.0-843.0	m
–								844.0-848.0	m
–									m

INITIAL OIL RECORD			LOGGING RECORD			PERF ☒ OPEN HOLE ☐
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	REMARKS
842.3 –	Show	NA	523.3 – 939.6	GRNL	SCH	DST #1 Interval was
843.0 –	Show	NA	523.3 – 939.6	LDT	"	830.0-855.0
891.0 –	Show	NA	523.3 – 939.6	PEF	"	
–			5.0 – 936.2	SONL	"	
–			523.3 – 939.0	DLLM	"	
–			466.0 – 920.0	CBVD	"	
			466.0 – 922.0	CBND	"	

INITIAL WATER RECORD			CORING RECORD				
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	mm	
217.0 –	NA	SUL	–				
252.0 –	NA	SUL	–				CMPL Interval was
414.0 –	NA	SUL	–				833.0-865.0 (SCH)
–			–				
–			–				
–			–				

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / [illegible]	0.0		
	DRIFT / [illegible]	4.8		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT	50.1		
	HAMILTON	57.6		
	MARCELLUS			
	DUNDEE	74.0		
	COLUMBUS			
	LUCAS	125.0		
	AMHERSTBURG	144.0		
	SYLVANIA			
	BOIS BLANC	195.5		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	198.0		
	G SHALE	262.4		
	F SHALE	269.1		
	F SALT			
	E CARBONATE	311.5		
	D SALT/EQUIVALENT			
	C SHALE	339.3		
	B MARKER	353.7		
	B EQUIVALENT	359.2		
	B SALT			
	B ANHYDRITE			
	A2 CARBONATE	376.0		
	A2 SALT			

	A2 ANHYDRITE	395.2		
	A1 CARBONATE	399.2		
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH	409.6		
	ERAMOSA			
	GOAT ISLAND	424.3		
	GASPORT/WARTON	507.4		
	DECEW			
	ROCHESTER	511.3		
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL	518.0		
	THOROLD			
	GRIMSBY			
	CABOT HEAD	521.1		
	MANITOULIN	560.7		
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON	570.4		
	BLUE MOUNTAIN - GEORG BAY	661.9		
	COLLINGWOOD			
	COBOURG	815.6		
	VERULAM	837.8		
	KIRKFIELD	882.9		
	COBOCONK	921.0		
	GULL RIVER			
	SHADOW LAKE			
CAMBRIAN				
PRECAMBRIAN				

GEOLOGY BY: T.R. Carter

CTY	Kent	TWP	Romney	BLK	TRAC 8	LOT 13	CON III
WELL NAME	Cons et al 34345 Romney 8-13-III			PERMIT	7274	INIT CLASS	DEV
OPERATOR	The Consumers Gas Co. Ltd			TARGET	ORD	CUR STATUS	OPGS-SUS

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	Underwater Gas Developers Ltd			PERMIT	1988-05-04	NORTH	134.9	m	TOP	6.0
RIG TYPE	Rotary	DEPTHS		SPUD	1988-05-14	SOUTH		m	BOT	938.0
CABLE TOP		KB ELEV	193.3	COMPTD	1988-05-21	EAST		m	TRAY	9485-
BOT		LOGGER	937.0	OFFCNF	1988-06-20	WEST	169.5	m		86
ROTRY TOP	4.7	DRILLER	938.0	WRKOVR		LAT	42 07 56.3			
BOT	938.0	DEEP END		ABNDND		LONG	82 25 27.5			
DRLG FLD		PLUG BK	937.0							

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS 0.6	$10^3m^3/d$
820.0 –	Show	NA	244	54.0	78.9	CEM	0	OIL 5.6	m^3/d
849.8 –	0.7	NA	178	29.8	519.5	CEM	0	SIP	kPa
–			114	14.0	937.0	CEM	0	FORM Cobourg, Verulam	
–			60	7.0	848.1	HAN	0	INTRVL 822.0-845.2	m
–									m
–									m

INITIAL OIL RECORD			LOGGING RECORD			PERF ☒ OPEN HOLE ☐
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	REMARKS
825.0 –			10.0 – 936.0	GRNL	SCH	Core Analysis
849.8 –	1.8	NA	10.0 – 933.0	SONL	"	Oil Analysis
–			515.0 – 936.0	LDT	"	Water Analysis
–			515.0 – 916.0	CBVD	"	DST #1 - 872.0-888.0
–			520.0 – 936.0	DLLM	"	DST #2 - 821.0-848.0
			515.0 – 936.0	PEF	"	
			817.0 – 936.5	CBLK	"	

INITIAL WATER RECORD			CORING RECORD				
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	mm	FMS: 817-936.5 (SCH)
135.0 –	NA	SUL					CMPL: 820.0-1072.5(SCH)
415.0 –	NA	NA	832.0 – 878.5	FRL	56	yes	CMPL: 760.0-875.0(CMPL)
–			–				CCL: 800.0-868.4(ATLAS)
–			–				
–			–				
–			–				

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / [illegible]	0.0		
	DRIFT / [illegible]	4.7		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT	54.5		
	HAMILTON	62.5		
	MARCELLUS			
	DUNDEE	72.1		
	COLUMBUS			
	LUCAS	115.5		
	AMHERSTBURG	146.0		
	SYLVANIA			
	BOIS BLANC	183.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	197.5		
	G SHALE	262.2		
	F SHALE	269.1		
	F SALT			
	E CARBONATE	311.0		
	D SALT/EQUIVALENT			
	C SHALE	339.5		
	B MARKER	352.2		
	B EQUIVALENT	357.7		
	B SALT			
	B ANHYDRITE			
	A2 CARBONATE	374.0		
	A2 SALT			

	A2 ANHYDRITE			
	A1 CARBONATE	392.8		
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH	406.1		
	ERAMOSA			
	GOAT ISLAND	429.5		
	GASPORT/WARTON	509.1		
	DECEW			
	ROCHESTER	512.2		
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL	518.9		
	THOROLD			
	GRIMSBY			
	CABOT HEAD	522.0		
	MANITOULIN	561.0		
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON	571.1		
	BLUE MOUNTAIN - GEORG BAY	662.4		
	COLLINGWOOD			
	COBOURG	817.0		
	VERULAM	839.2		
	KIRKFIELD	883.6		
	COBOCONK	920.5		
	GULL RIVER			
	SHADOW LAKE			
CAMBRIAN				
PRECAMBRIAN				

GEOLOGY BY: T.R. Carter

T.R. Carter

CTY Kent | TWP Romney | BLK | TRAC 3 | LOT 13 | CON III

WELL NAME Cons et al 34349 Romney 3-13-III | PERMIT 7399 | INIT CLASS DEV

OPERATOR The Consumers Gas Co. Ltd | TARGET ORD | CUR STATUS OP

DRILLING DATA

CONTRACTOR Underwater Gas Developers Ltd
RIG TYPE Rotary
CABLE TOOL: TOP / BOT
ROTRY TOP 4.7 / BOT 938.0
DRLG FLD
DEPTHS
KB ELEV 192.2
LOGGER 936.9
DRILLER 938.0
DEEP END
PLUG BK 930.5

DATES

PERMIT 1988-09-16
SPUD 1988-09-29
COMPTD 1988-10-08
OFFCNF 1988-11-07
WRKOVR
ABNDND

COORDINATES

NORTH m
SOUTH 448.5 m
EAST 49.2 m
WEST m
LAT 42 08 06
LONG 82 26 04

SAMPLES

TOP 51.0
BOT 938.0
TRAY 9493-94

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244	54.0	80.1	CEM	0
178	29.8	522.0	CEM	0
114	14.0	930.5	CEM	0
60	7.0	803.7	HAN	0

COMPLETION DATA

GAS 3.7 $10^3 m^3/d$
OIL 26.0 m^3/d
SIP 8200 kPa
FORM Cobourg, Verulam
INTRVL 833.5-854.5 m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
850.0 –	Show	NA
838.0 –	Show	NA
–		
–		
–		•

LOGGING RECORD

INTERVAL	TYPE	COMPANY
522.3 – 935.7	GRNL	SCH
522.3 – 935.7	LDT	"
815.0 – 927.9	CBLK	"
25.0 – 933.2	SONL	"
522.0 – 935.9	DLLM	"
500.0 – 910.0	CMPL	"
500.0 – 904.0	CBVD	"

PERF ☒ OPEN HOLE ☐

REMARKS

DST #1 Interval was 833.5-854.5
Oil Analysis
Gas Analysis
Water Analysis

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
160.0 –	NA	SUL
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			

SCH Logs Cont.
CBND: 500.0-910.0

CMPL Logs:
GRL: 800.0-854.0
CMPL: 800.0-860.0
CCL: 800.0-854.0

GEOLOGICAL CONTACTS

		TOP	ELEV	THICK
	KB / ~~LUKE BIRDCAGE~~	0.0		
	DRIFT / ~~LUKE BIRDCAGE~~	4.7		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT	45.0		
	HAMILTON	55.0		
	MARCELLUS			
	DUNDEE	70.5		
	COLUMBUS			
	LUCAS	129.0		
	AMHERSTBURG	141.0		
	SYLVANIA			
	BOIS BLANC	192.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	202.5		
	G SHALE	258.0		
	F SHALE	266.5		
	F SALT			
	E CARBONATE	307.0		
	D SALT/EQUIVALENT			
	C SHALE	335.9		
	B MARKER	349.0		
	B EQUIVALENT	354.5		
	B SALT			
	B ANHYDRITE			
	A2 CARBONATE	369.3		
	A2 SALT			
	A2 ANHYDRITE	390.1		
	A1 CARBONATE	393.6		
	A1 SALT			
	A1 ANHYDRITE			
SILURIAN	GUELPH	403.5		
	ERAMOSA			
	GOAT ISLAND	433.5		
	GASPORT/WARTON	507.4		
	DECEW			
	ROCHESTER	512.0		
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL	519.6		
	THOROLD			
	GRIMSBY			
ORDOVICIAN	CABOT HEAD	522.8		
	MANITOULIN	561.3		
	WHIRLPOOL			
	QUEENSTON	571.8		
	BLUE MOUNTAIN - GEORG. BAY	663.3		
	COLLINGWOOD			
	COBOURG	815.7		
	VERULAM	837.5		
	KIRKFIELD	883.0		
	COBOCONK	918.0		
	GULL RIVER			
	SHADOW LAKE			
	CAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Kent | TWP Romney | BLK | TRAC 6 | LOT 13 | CON IV

WELL NAME Cons et al 34347 Romney 6-13-IV | PERMIT 7315 | INIT CLASS NFW

OPERATOR The Consumers Gas Co. Ltd | TARGET ORD | CUR STATUS OPGS

DRILLING DATA

CONTRACTOR Underwater Gas Developers Ltd
RIG TYPE Rotary
CABLE TOOL: TOP / BOT
ROTRY TOP 4.7 / BOT 851.0
DRLG FLD
DEPTHS
KB ELEV 192.7
LOGGER 848.0
DRILLER 851.0
DEEP END
PLUG BK 844.5

DATES

PERMIT 1988-05-20
SPUD 1988-05-24
COMPTD 1988-05-30
OFFCNF 1989-05-30
WRKOVR 1990-01-30
ABNDND

COORDINATES

NORTH 350.5 m
SOUTH m
EAST 107.0 m
WEST m
LAT 42 08 12
LONG 82 26 26

SAMPLES

TOP 6.0
BOT 840.0
TRAY 9404-05

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
827.0 –	Show	NA
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244	54.0	80.0	CEM	0
178	29.8	525.9	CEM	0
114	14.0	844.5	CEM	0
73	9.7	809.8	HAN	0

COMPLETION DATA

GAS 0.2 $10^3 m^3/d$
OIL 9 m^3/d
SIP 6700 kPa
FORM Cobourg, Verulam
INTRVL 830.0-840.0 m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
827.0 –	NA	NA
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
10.0 – 843.0	SONL	SCH
525.0 – 847.0	GRNL	"
525.0 – 847.0	PEF	"
525.0 – 847.0	LDT	"
525.0 – 847.0	LATL	"
500.0 – 840.0	CBVD	"
795.0 – 831.3	CMPL	"

PERF ☒ OPEN HOLE ☐

REMARKS

Oil Analysis
Gas Analysis
Water Analysis

A-2 Shale at 390.3

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
130.0 –	NA	SUL
202.0 –	NA	SUL
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS

		TOP	ELEV	THICK
	KB / ~~XXXXXXXX~~	0.0		
	DRIFT / ~~XXXXXXXX~~	4.7		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON	66.4		
	MARCELLUS			
	DUNDEE	76.9		
	COLUMBUS			
	LUCAS	123.5		
	AMHERSTBURG	143.0		
	SYLVANIA			
	BOIS BLANC	192.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	209.0		
	G SHALE	261.4		
	F SHALE	268.0		
	F SALT			
	E CARBONATE	309.9		
	D SALT/EQUIVALENT			
	C SHALE	338.8		
	B MARKER	351.0		
	B EQUIVALENT	356.3		
	B SALT			
	B ANHYDRITE			
	A2 CARBONATE	373.5		
	A2 SALT			
	A2 ANHYDRITE	392.6		
	A1 CARBONATE	396.1		
	A1 SALT			
	A1 ANHYDRITE			
SILURIAN	GUELPH	407.5		
	ERAMOSA			
	GOAT ISLAND	429.1		
	GASPORT/WARTON	504.9		
	DECEW			
	ROCHESTER	511.2		
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL	517.9		
	THOROLD			
	GRIMSBY			
ORDOVICIAN	CABOT HEAD	520.9		
	MANITOULIN	559.8		
	WHIRLPOOL			
	QUEENSTON	570.1		
	BLUE MOUNTAIN - GEORG. BAY	662.4		
	COLLINGWOOD			
	COBOURG	817.8		
	VERULAM	838.4		
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
	CAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Kent TWP Rosney BLK TRAC 8 LOT 13 CON IV

WELL NAME Cons et al 34351 Rosney 8-13-IV PERMIT 7410 INIT CLASS DEV

OPERATOR The Consumers Gas Co. Ltd TARGET ORD CUR STATUS OPGS

DRILLING DATA

CONTRACTOR Underwater Gas Developers

RIG TYPE Rotary DEPTHS

CABLE TOP KB ELEV 192.6

BOT LOGGER 1107.6

ROTRY TOP 4.8 DRILLER 1110.0

BOT 1110.0 DEEP END

DRLG FLD PLUG BK 1095.0

DATES

PERMIT 1988-10-19

SPUD 1988-10-28

COMPTD 1988-11-06

OFFCNF 1989-01-05

WRKOVR 1989-01-05

ABNDND

COORDINATES

NORTH 107.0 m

SOUTH m

EAST m

WEST 176.7 m

LAT 42 08 28.5

LONG 82 26 09

SAMPLES

TOP 66.0

BOT 1110.0

TRAY 9544-45

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
843.0 –	Show	NA
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244	54.0	90.8	CEM	0
178	29.8	530.1	CEM	0
114	14.0	1095.7	CEM	0
60	7.0	851.2	HAN	0

COMPLETION DATA

GAS 1.3 $10^3 m^3/kJ$

OIL 7.0 m^3/kJ

SIP 6800 kPa

FORM Verulam

INTRVL 839.0-849.0 m

m

m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
843.0 –	Show	NA
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
530.0 – 1107.6	GRNL	SCH
530.0 – 1107.6	LDT	"
530.0 – 1107.6	PEF	"
25.0 – 1098.0	SONL	"
530.0 – 1108.0	DLLM	"
750.0 – 1067.5	GRNL	CHFL
0.0 – 1066.3	CBND	"

PERF ☑ OPEN HOLE ☐

REMARKS

DST #1 - 878.0-900.0

DST #2 - 837.0-835.0

Gas Analysis

Oil Analysis

Water Analysis

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			

CHFL Logs Cont.

CHFL: 865.0-950.0

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / ELEVATION	0.0		
DRIFT / SURFICIAL DEPOSITS	4.8		
DEVONIAN: PORT LAMBTON			
DEVONIAN: KETTLE POINT			
DEVONIAN: HAMILTON	67.6		
DEVONIAN: MARCELLUS			
DEVONIAN: DUNDEE	78.8		
DEVONIAN: COLUMBUS			
DEVONIAN: LUCAS	117.0		
DEVONIAN: AMHERSTBURG	141.0		
DEVONIAN: SYLVANIA			
DEVONIAN: BOIS BLANC	196.0		
DEVONIAN: SPRINGVALE			
DEVONIAN: ORISKANY	203.8		
SALINA: BASS ISLANDS	208.8		
SALINA: G SHALE	260.2		
SALINA: F SHALE	266.6		
SALINA: F SALT			
SALINA: E CARBONATE	310.3		
SALINA: D SALT/EQUIVALENT			
SALINA: C SHALE	339.0		
SALINA: B MARKER	351.4		
SALINA: B EQUIVALENT	357.0		
SALINA: B SALT			
SALINA: B ANHYDRITE			
SALINA: A1 CARBONATE	372.4		
SALINA: A2 SALT			

A2 ANHYDRITE	391.3		
A1 CARBONATE	394.5		
A1 SALT			
A1 ANHYDRITE			
GUELPH	405.8		
ERAMOSA			
GOAT ISLAND	435.0		
GASPORT/WARTON	505.5		
DECEW			
ROCHESTER	512.4		
IRONDEQUOIT			
REYNALES/FOSSIL HILL	519.3		
THOROLD			
GRIMSBY			
CABOT HEAD	522.4		
MANITOULIN	560.5		
WHIRLPOOL			
ORDOVICIAN: QUEENSTON	570.9		
ORDOVICIAN: BLUE MOUNTAIN - GEORG. BAY	663.0		
ORDOVICIAN: COLLINGWOOD			
ORDOVICIAN: COBOURG	815.0		
ORDOVICIAN: VERULAM	837.3		
ORDOVICIAN: KIRKFIELD	882.9		
ORDOVICIAN: COBOCONK	919.2		
ORDOVICIAN: GULL RIVER	950.2		
ORDOVICIAN: SHADOW LAKE	1055.2		
CAMBRIAN	1057.0		
PRECAMBRIAN	1089.0		

GEOLOGY BY: T.R. Carter

CTY Kent TWP Rosney BLK TRAC 5 LOT 14 CON II

WELL NAME Cons et al 34348 Rosney 5-14-II PERMIT 7398 INIT CLASS DEV

OPERATOR The Consumers Gas Co. Ltd TARGET ORD CUR STATUS GSOS-ABD

DRILLING DATA

CONTRACTOR Underwater Gas Developers Ltd

RIG TYPE Rotary DEPTHS

CABLE TOP KB ELEV 193.2

BOT LOGGER 1014.7

ROTRY TOP 4.8 DRILLER 1016.0

BOT 1016.0 DEEP END

DRLG FLD PLUG BK

DATES

PERMIT 1988-09-16

SPUD 1988-09-20

COMPTD 1988-09-27

OFFCNF 1988-10-27

WRKOVR

ABNDND 1988-09-28

COORDINATES

NORTH 450.0 m

SOUTH m

EAST m

WEST 108.0 m

LAT 42 07 45

LONG 82 24 33

SAMPLES

TOP 52.0

BOT 1015.0

TRAY 9534-35

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
913.0 –	Show	NA
823.0 –	Show	NA
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244	54.0	80.8	CEM	0
178	29.8	525.1	CEM	0

COMPLETION DATA

GAS $10^3 m^3/kJ$

OIL m^3/kJ

SIP kPa

FORM

INTRVL m

m

m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
847.0 –	Show	NA
856.0 –	Show	NA
913.0 –	Show	NA
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
524.0 – 1013.9	GRNL	SCH
524.0 – 1013.9	LDT	"
524.0 – 1013.9	PEF	"
10.0 – 1010.3	SONL	"
524.0 – 1014.0	DLLM	"
820.0 – 1005.0	CBLK	"
–		

PERF ☐ OPEN HOLE ☐

REMARKS

A-2 Shale at 395.1

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
953.0 –	NA	SAL
974.0 –	NA	SAL
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / ELEVATION	0.0		
DRIFT / SURFICIAL DEPOSITS	4.8		
DEVONIAN: PORT LAMBTON			
DEVONIAN: KETTLE POINT			
DEVONIAN: HAMILTON	57.5		
DEVONIAN: MARCELLUS			
DEVONIAN: DUNDEE	79.6		
DEVONIAN: COLUMBUS			
DEVONIAN: LUCAS	130.0		
DEVONIAN: AMHERSTBURG	148.0		
DEVONIAN: SYLVANIA			
DEVONIAN: BOIS BLANC	184.0		
DEVONIAN: SPRINGVALE			
DEVONIAN: ORISKANY	205.0		
SALINA: BASS ISLANDS	211.5		
SALINA: G SHALE	264.0		
SALINA: F SHALE	270.3		
SALINA: F SALT			
SALINA: E CARBONATE	312.8		
SALINA: D SALT/EQUIVALENT			
SALINA: C SHALE	343.0		
SALINA: B MARKER	355.4		
SALINA: B EQUIVALENT	360.9		
SALINA: B SALT			
SALINA: B ANHYDRITE			
SALINA: A2 CARBONATE	378.0		
SALINA: A2 SALT			

A2 ANHYDRITE	397.4		
A1 CARBONATE	401.0		
A1 SALT			
A1 ANHYDRITE			
GUELPH	410.8		
ERAMOSA			
GOAT ISLAND	420.5		
GASPORT/WARTON	507.0		
DECEW			
ROCHESTER	511.9		
IRONDEQUOIT			
REYNALES/FOSSIL HILL	518.3		
THOROLD			
GRIMSBY			
CABOT HEAD	521.9		
MANITOULIN	561.0		
WHIRLPOOL			
ORDOVICIAN: QUEENSTON	571.1		
ORDOVICIAN: BLUE MOUNTAIN - GEORG. BAY	664.2		
ORDOVICIAN: COLLINGWOOD			
ORDOVICIAN: COBOURG	819.1		
ORDOVICIAN: VERULAM	840.3		
ORDOVICIAN: KIRKFIELD	888.0		
ORDOVICIAN: COBOCONK	924.8		
ORDOVICIAN: GULL RIVER	954.0		
ORDOVICIAN: SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

T.R. Carter

CTY Kent TWP Romney BLK TRAC 3 LOT 14 CON II
WELL NAME Cons et al 34344 Romney 3-14-II PERMIT 7261 INIT CLASS NPW
OPERATOR The Consumers Gas Co. Ltd TARGET ORD CUR STATUS OPGS

DRILLING DATA

CONTRACTOR Underwater Gas Develope s Ltd
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 192.6
BOT LOGGER 1060.0
ROTRY TOP 4.7 DRILLER 1071.0
BOT 1071.0 DEEP END
DRLG FLD PLUG BK 1061.5

DATES

PERMIT 1988-04-21
SPUD 1988-05-03
COMPTD 1988-05-11
OFFCNF 1989-05-11
WRKOVR
ABNOND

COORDINATES

NORTH m
SOUTH 610.0 m
EAST 150.0 m
WEST m
LAT 42 07 44
LONG 82 24 54

SAMPLES

TOP 6.0
BOT 1070.0
TRAY 9438-
39

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
Drift –	Show	NA
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244	54.0	78.0	CEM	0
178	29.8	530.9	CEM	0
114	14.0	1061.5	CEM	0
60	6.9	862.1	SUS	0

COMPLETION DATA

GAS 0.6 $10^3 m^3/d$
OIL 9 m^3/d
SIP kPa
FORM Verulam
INTRVL 841.5-860.0 m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
843.0 –	6.6	NA
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
77.0 – 1055.0	SONL	SCH
480.0 – 1035.0	CBVD	"
480.0 – 975.0	CBND	"
520.0 – 1060.0	PEF	"
520.0 – 1060.0	GRNL	"
520.0 – 1060.0	LDT	"
530.0 – 1030.0	DLLM	"

PERF ☒ OPEN HOLE ☐

REMARKS

DST #1 - 870.0-895.0
Oil Analysis
Gas Analysis
Water Analysis

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
138.0 –	NA	SUL
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			

CMPL - 830.1-891.0(SCH)
CMPL - 800.0-870.0
(CMPL)

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / [illegible]	0.0		
	DRIFT / [illegible]	4.7		
DEVONIAN	PORT LAMBTON			
DEVONIAN	KETTLE POINT	50.1		
DEVONIAN	HAMILTON	59.8		
DEVONIAN	MARCELLUS			
DEVONIAN	DUNDEE	76.1		
DEVONIAN	COLUMBUS			
DEVONIAN	LUCAS	126.0		
DEVONIAN	AMHERSTBURG			
DEVONIAN	SYLVANIA			
DEVONIAN	BOIS BLANC	198.0		
DEVONIAN	SPRINGVALE			
DEVONIAN	ORISKANY			
SILURIAN	BASS ISLANDS	210.0		
SILURIAN	G SHALE	264.4		
SILURIAN	F SHALE	271.3		
SILURIAN	F SALT			
SILURIAN	E CARBONATE	315.2		
SILURIAN	D SALT/EQUIVALENT			
SILURIAN	C SHALE	343.0		
SILURIAN	B MARKER	357.5		
SILURIAN	B EQUIVALENT	363.0		
SILURIAN	B SALT			
SILURIAN	B ANHYDRITE			
SILURIAN	A2 CARBONATE	378.7		
SILURIAN	A2 SALT			
SILURIAN	A2 ANHYDRITE	398.6		
SILURIAN	A1 CARBONATE	402.2		
SILURIAN	A1 SALT			
SILURIAN	A1 ANHYDRITE			
SILURIAN	GUELPH	412.7		
SILURIAN	ERAMOSA			
SILURIAN	GOAT ISLAND	441.1		
SILURIAN	GASPORT/WIARTON	509.1		
SILURIAN	DECEW			
SILURIAN	ROCHESTER	513.3		
SILURIAN	IRONDEQUOIT			
SILURIAN	REYNALES/FOSSIL HILL	519.1		
SILURIAN	THOROLD			
SILURIAN	GRIMSBY			
SILURIAN	CABOT HEAD	523.2		
SILURIAN	MANITOULIN	562.7		
ORDOVICIAN	WHIRLPOOL			
ORDOVICIAN	QUEENSTON	572.6		
ORDOVICIAN	BLUE MOUNTAIN - GEORG. BAY	665.6		
ORDOVICIAN	COLLINGWOOD			
ORDOVICIAN	COBOURG	820.3		
ORDOVICIAN	VERULAM	841.1		
ORDOVICIAN	KIRKFIELD	885.5		
ORDOVICIAN	COBOCONK	923.1		
ORDOVICIAN	GULL RIVER	954.7		
ORDOVICIAN	SHADOW LAKE	1061.1		
CAMBRIAN		1062.0		
PRECAMBRIAN				

GEOLOGY BY: T.R. Carter

CTY Kent TWP Romney BLK TRAC 5 LOT 15 CON I
WELL NAME Cons et al 34427 Romney 5-15-I PERMIT 7414 INIT CLASS NPW
OPERATOR The Consumers Gas Co. Ltd TARGET ORD CUR STATUS OPGS

DRILLING DATA

CONTRACTOR Underwater Gas Developers Ltd
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 192.4
BOT LOGGER 1116.3
ROTRY TOP 4.8 DRILLER 1120.0
BOT 1120.0 DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-11-08
SPUD 1988-11-10
COMPTD 1988-11-19
OFFCNF 1989-11-19
WRKOVR 1989-07-12
ABNOND

COORDINATES

NORTH m
SOUTH 834.4 m
EAST m
WEST 295.7 m
LAT 42 07 22.5
LONG 82 23 42.5

SAMPLES

TOP 54.0
BOT 1120.0
TRAY 9385-
86

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
850.0 –	Show	
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244	54.0	89.0	CEM	0
178	29.8	536.7	CEM	0
114	14.0	968.3	CEM	0
60	7.0	869.2	HAN	0

COMPLETION DATA

GAS 0.9 $10^3 m^3/d$
OIL 16.0 m^3/d
SIP 8600 kPa
FORM Cobourg-Verulam
INTRVL 840.0-867.4 m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
845.0 –	Show	
873.0 –	Show	
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
0.0 – 1115.2	GRL	SCH
0.0 – 1115.2	SONL	"
533.2 – 1028.3	GRNL	"
533.2 – 1028.3	DENL	"
533.2 – 1024.0	LATL	"
533.2 – 1024.0	MSFL	"
500.0 – 941.0	CBND	"

PERF ☒ OPEN HOLE ☐

REMARKS

Water Analysis
Oil, Gas Analysis
A-2 Shale at 398.5
Additional logs by Atlas
DST - 840.0-870.0

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
167.0 –		SUL
284.9 –		NA
873.0 –		SAL
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / [illegible]	0.0		
	DRIFT / [illegible]	4.8		
DEVONIAN	PORT LAMBTON			
DEVONIAN	KETTLE POINT			
DEVONIAN	HAMILTON	56.3		
DEVONIAN	MARCELLUS			
DEVONIAN	DUNDEE	83.1		
DEVONIAN	COLUMBUS			
DEVONIAN	LUCAS	126.0		
DEVONIAN	AMHERSTBURG	153.0		
DEVONIAN	SYLVANIA			
DEVONIAN	BOIS BLANC	174.0		
DEVONIAN	SPRINGVALE			
DEVONIAN	ORISKANY	212.5		
SILURIAN	BASS ISLANDS	221.0		
SILURIAN	G SHALE	269.8		
SILURIAN	F SHALE	276.9		
SILURIAN	F SALT			
SILURIAN	E CARBONATE	318.5		
SILURIAN	D SALT/EQUIVALENT			
SILURIAN	C SHALE	345.3		
SILURIAN	B MARKER	359.7		
SILURIAN	B EQUIVALENT	365.3		
SILURIAN	B SALT			
SILURIAN	B ANHYDRITE			
SILURIAN	A2 CARBONATE	382.1		
SILURIAN	A2 SALT			
SILURIAN	A2 ANHYDRITE	401.4		
SILURIAN	A1 CARBONATE	405.1		
SILURIAN	A1 SALT			
SILURIAN	A1 ANHYDRITE			
SILURIAN	GUELPH	415.6		
SILURIAN	ERAMOSA			
SILURIAN	GOAT ISLAND			
SILURIAN	GASPORT/WIARTON	513.0		
SILURIAN	DECEW			
SILURIAN	ROCHESTER	517.2		
SILURIAN	IRONDEQUOIT			
SILURIAN	REYNALES/FOSSIL HILL	524.3		
SILURIAN	THOROLD			
SILURIAN	GRIMSBY			
SILURIAN	CABOT HEAD	527.8		
SILURIAN	MANITOULIN	566.3		
ORDOVICIAN	WHIRLPOOL			
ORDOVICIAN	QUEENSTON	576.6		
ORDOVICIAN	BLUE MOUNTAIN - GEORG. BAY	670.8		
ORDOVICIAN	COLLINGWOOD			
ORDOVICIAN	COBOURG	838.0		
ORDOVICIAN	VERULAM	858.6		
ORDOVICIAN	KIRKFIELD	898.2		
ORDOVICIAN	COBOCONK	937.1		
ORDOVICIAN	GULL RIVER	966.0		
ORDOVICIAN	SHADOW LAKE	1064.0		
CAMBRIAN		1065.0		
PRECAMBRIAN		1101.3		

GEOLOGY BY: T.R. Carter

CTY Kent TWP Romney BLK TRAC 2 LOT 15 CON III

WELL NAME Cons et al 34352 Romney 2-15-III PERMIT 7421 INIT CLASS NPW

OPERATOR The Consumers Gas Co. Ltd TARGET ORD CUR STATUS OP

DRILLING DATA

CONTRACTOR Underwater Gas Developers
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 193.2
BOT LOGGER 1110.8
ROTRY TOP 4.7 DRILLER 1111.0
BOT 1111.0 DEEP END
DRLG FLD PLUG BK 1050.0

DATES

PERMIT 1988-11-23
SPUD 1988-11-24
COMPTD 1988-12-03
OFFCNF 1989-12-03
WRKOVR 1989-06-02
ABNDND

COORDINATES

NORTH: m
SOUTH 218.0 m
EAST 107.0 m
WEST m
LAT 42 08 40.5
LONG 82 25 29

SAMPLES

TOP 6.0
BOT 1110.0
TRAY 9377-
78

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244	54.0	87.1	CEM	0
178	29.8	531.1	CEM	0
114	14.0	1062.3	CEM	0
60	7.0	841.2	HAN	0

COMPLETION DATA

GAS 0.3 $10^3 m^3/d$
OIL 7.0 m^3/d
SIP 6900 kPa
FORM Kirkfield
INTRVL 847.8-878.8 m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
796.0 –	Show	NA
850.0 – 853.0	Show	NA
863.0 –	Show	NA
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
530.0 – 1110.0	GRNL	SCH
530.0 – 1110.0	LDT	"
530.0 – 1110.0	PEF	"
95.0 – 1100.0	SONL	"
530.0 – 1110.0	DLLM	"
530.0 – 1110.0	CBLK	"
775.0 – 1044.3	GRNL	CMPL

PERF ☑ OPEN HOLE ☐

REMARKS

DST #1 - 906.0-920.0
DST #2 - 843.0-857.0
Gas, Oil, Water Analysis
A-2 Shale at 398.2

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
205.0 –	NA	SUL
210.0 –	NA	SUL
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			

CMPL Logs Cont.
CBND - 500.0-1043.1
CMPL - 750.0-900.0
CCL - 800.0-900.0

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB KIRKFIELD	0.0		
DRIFT KIRKFIELD	4.7		
PORT LAMBTON			
KETTLE POINT	56.4		
HAMILTON	67.4		
MARCELLUS			
DUNDEE	89.0		
COLUMBUS			
LUCAS	132.0		
AMHERSTBURG	152.0		
SYLVANIA			
BOIS BLANC	201.0		
SPRINGVALE			
ORISKANY	207.0		
BASS ISLANDS	216.0		
G SHALE	264.2		
F SHALE	271.0		
F SALT			
E CARBONATE	313.3		
D SALT/EQUIVALENT			
C SHALE	342.0		
B MARKER	356.2		
B EQUIVALENT	360.0		
B SALT			
B ANHYDRITE			
A2 CARBONATE	378.7		
A2 SALT			
A2 ANHYDRITE	400.4		
A1 CARBONATE	403.8		
A1 SALT			
A1 ANHYDRITE			
GUELPH	415.2		
ERAMOSA			
GOAT ISLAND			
GASPORT/WIARTON	514.3		
DECEW			
ROCHESTER	518.0		
IRONDEQUOIT			
REYNALES/FOSSIL HILL	525.0		
THOROLD			
GRIMSBY			
CABOT HEAD	528.0		
MANITOULIN	567.3		
WHIRLPOOL			
QUEENSTON	577.9		
BLUE MOUNTAIN - GEORG BAY	667.6		
COLLINGWOOD			
COBOURG	822.7		
VERULAM	846.4		
KIRKFIELD	890.7		
COBOCONK	947.8		
GULL RIVER	980.0		
SHADOW LAKE	1059.2		
CAMBRIAN	1060.0		
PRECAMBRIAN	1088.7		

GEOLOGY BY: T.R. Carter

CTY Kent TWP Zone BLK TRAC 2-8 LOT 7 CON VIII

WELL NAME Kodyen Disposal Zone 2-8-7-VIII PERMIT 7241 INIT CLASS BD

OPERATOR L.M. Kodyen TARGET DEV CUR STATUS OS-BD

DRILLING DATA

CONTRACTOR Eagle Drilling Services
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 201.7
BOT LOGGER 197.8
ROTRY TOP 1.6 DRILLER 201.2
BOT 201.2 DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-02-19
SPUD 1988-02-18
COMPTD 1988-02-27
OFFCNF 1988-03-28
WRKOVR
ABNDND

COORDINATES

NORTH 235.9 m
SOUTH m
EAST 205.6 m
WEST m
LAT 42 36 13
LONG 81 53 37

SAMPLES

TOP 61.0
BOT 201.2
TRAY 5548

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244	NA	10.4	BAR	0
219	NA	48.8	BAR	0
177	NA	61.9	BAR	0
114	NA	129.8	CEM	0

COMPLETION DATA

GAS $10^3 m^3/d$
OIL m^3/d
SIP kPa
FORM Lucas
INTRVL m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
20.0 – 21.3	Show	NA
115.2 – 122.5	Show	NA
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
0.0 – 197.8	GRNL	CMPL
0.0 – 197.8	DENL	"
–		
–		
–		
–		

PERF ☐ OPEN HOLE ☐

REMARKS

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
20.0 – 21.3	NA	FRE
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB KIRKFIELD	0.0		
DRIFT KIRKFIELD	1.6		
PORT LAMBTON			
KETTLE POINT			
HAMILTON			
MARCELLUS			
DUNDEE	61.6		
COLUMBUS	112.0		
LUCAS	130.0		
AMHERSTBURG			
SYLVANIA			
BOIS BLANC			
SPRINGVALE			
ORISKANY			
BASS ISLANDS			
G SHALE			
F SHALE			
F SALT			
E CARBONATE			
D SALT/EQUIVALENT			
C SHALE			
B MARKER			
B EQUIVALENT			
B SALT			
B ANHYDRITE			
A2 CARBONATE			
A2 SALT			
A2 ANHYDRITE			
A1 CARBONATE			
A1 SALT			
A1 ANHYDRITE			
GUELPH			
ERAMOSA			
GOAT ISLAND			
GASPORT/WIARTON			
DECEW			
ROCHESTER			
IRONDEQUOIT			
REYNALES/FOSSIL HILL			
THOROLD			
GRIMSBY			
CABOT HEAD			
MANITOULIN			
WHIRLPOOL			
QUEENSTON			
BLUE MOUNTAIN - GEORG BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

T.R. Carter

CTY Lambton TWP Dawn BLK TRAC 4 LOT 18 CON II
WELL NAME Penway et al Dawn 4-18-II PERMIT 7239 INIT CLASS NPW
OPERATOR Penway Explorers Ltd TARGET SAL CUR STATUS DH-ABD

DRILLING DATA

CONTRACTOR Shaw Drilling
RIG TYPE Cable DEPTHS
CABLE TOP 1.2 KB ELEV 191.2
BOT 596.0 LOGGER
ROTRY TOP DRILLER 596.0
BOT DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-02-10
SPUD 1988-02-16
COMPTD 1988-04-12
OFFCNF 1989-04-12
WRKOVR
ABNDND 1988-04-14

COORDINATES

NORTH 167.6 m
SOUTH m
EAST m
WEST 502.9 m
LAT 42 40 14
LONG 82 12 00

SAMPLES

TOP 167.6
BOT 502.9
TRAY 9917

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
273	60.2	22.7	SHO	22.7
219	35.7	159.2	SHO	159.2
178	34.0	421.1	CEM	325.4

COMPLETION DATA

GAS $10^3 m^3/d$
OIL m^3/d
SIP kPa
FORM
INTRVL m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
–		
–		
–		
–		
–		
–		

PERF ☐ OPEN HOLE ☐

REMARKS

A-2 Shale at 527.0

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
20.0 –	NA	FRE
163.0 –	Show	SUL
194.0 –	180.0	SUL
506.0 –	416.0	SAL
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	MM
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS

		TOP	ELEV	THICK
	KB /LAKE KEWAUX	0.0		
	DRIFT /LAKE ERIE/OIL	1.2		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT	20.0		
	HAMILTON	82.0		
	MARCELLUS			
	DUNDEE	156.0		
	COLUMBUS			
	LUCAS	189.0		
	AMHERSTBURG	252.0		
	SYLVANIA			
	BOIS BLANC	303.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	346.0		
	G SHALE	389.5		
	F SHALE	396.0		
	F SALT			
	E CARBONATE	447.0		
	D SALT/EQUIVALENT			
	C SHALE	466.0		
	B MARKER	478.0		
	B EQUIVALENT			
	B SALT			
	B ANHYDRITE	491.5		
	A2 CARBONATE	496.0		
	A2 SALT	538.0		

	A2 ANHYDRITE	547.2		
	A1 CARBONATE	548.5		
	A1 SALT			
	A1 ANHYDRITE	581.0		
	GUELPH	583.5		
	ERAMOSA			
	GOAT ISLAND	592.5		
SILURIAN	GASPORT/WIARTON			
	DECEW			
	ROCHESTER			
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL			
	THOROLD			
	GRIMSBY			
	CABOT HEAD			
	MANITOULIN			
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON			
	BLUE MOUNTAIN - GEORG. BAY			
	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
CAMBRIAN				
PRECAMBRIAN				

GEOLOGY BY: T.R. Carter

CTY Lambton TWP Dawn BLK TRAC LOT 19 CON I
WELL NAME Union Dawn 264 Dawn 19-I PERMIT 7120 INIT CLASS NCS
OPERATOR Union Gas Ltd TARGET SAL CUR STATUS NCS

DRILLING DATA

CONTRACTOR J. Newport
RIG TYPE Cable DEPTHS
CABLE TOP 1.2 KB ELEV 189.92
BOT 545.0 LOGGER 544.3
ROTRY TOP DRILLER 545.0
BOT DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1987-04-02
SPUD 1987-12-11
COMPTD 1988-02-25
OFFCNF 1988-03-27
WRKOVR
ABNDND

COORDINATES

NORTH 365.0 m
SOUTH m
EAST 343.0 m
WEST m
LAT 42 40 43
LONG 82 14 20.5

SAMPLES

TOP 22.0
BOT 544.0
TRAY 9468

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
485.0 –	Show	NA
459.0 – 462.0	Show	NA
238.0 – 239.0	Show	NA
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
340	71.4	22.9	SHO	0
273	60.8	149.3	SHO	149.3
219	35.7	375.0	CEM	0
178	29.8	480.6	CEM	0

COMPLETION DATA

GAS $10^3 m^3/d$
OIL m^3/d
SIP kPa
FORM Guelph
INTRVL 485.0-545.0 m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
0.0 – 544.3	GRNL	SCH
0.0 – 465.0	CBND	"
0.0 – 358.0	CBND	"
475.0 – 543.5	DENL	"
–		
–		
–		

PERF ☐ OPEN HOLE ☑

REMARKS

A-2 Shale at 477.3

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
22.0 –	NA	FRE
154.0 – 156.0	38.0	SUL
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	MM
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS

		TOP	ELEV	THICK
	KB /LAKE KEWAUX	0.0		
	DRIFT /LAKE ERIE/OIL	1.2		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT	22.5		
	HAMILTON	80.0		
	MARCELLUS			
	DUNDEE	148.0		
	COLUMBUS			
	LUCAS	172.0		
	AMHERSTBURG	237.0		
	SYLVANIA			
	BOIS BLANC	300.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	336.0		
	G SHALE	367.1		
	F SHALE	374.5		
	F SALT			
	E CARBONATE	407.1		
	D SALT/EQUIVALENT			
	C SHALE	429.7		
	B MARKER	441.0		
	B EQUIVALENT	446.0		
	B SALT			
	B ANHYDRITE	455.5		
	A2 CARBONATE	460.5		
	A2 SALT			

	A2 ANHYDRITE	480.8		
	A1 CARBONATE			
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH	482.5		
	ERAMOSA			
	GOAT ISLAND			
SILURIAN	GASPORT/WIARTON			
	DECEW			
	ROCHESTER			
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL			
	THOROLD			
	GRIMSBY			
	CABOT HEAD			
	MANITOULIN			
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON			
	BLUE MOUNTAIN - GEORG. BAY			
	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
CAMBRIAN				
PRECAMBRIAN				

GEOLOGY BY: T.R. Carter

CTY: Lambton TWP: Dawn BLK: TRAC: 1 LOT: 26 CON: II

WELL NAME: Forbes Disposal Dawn 1-26-II PERMIT: 7358 INIT CLASS: BD

OPERATOR: Forbes Resources Inc. TARGET: DEV CUR STATUS: BD

DRILLING DATA

CONTRACTOR: Ken Girard Drilling
RIG TYPE: Cable
CABLE TOP: 1.6 BOT: 183.8
ROTRY TOP: BOT:
DRLG FLD:

DEPTHS
KB ELEV: 193.1
LOGGER: 182.9
DRILLER: 183.8
DEEP END:
PLUG BK:

DATES

PERMIT: 1988-07-18
SPUD: 1988-09-26
COMPTD: 1988-10-28
OFFCNF: 1988-11-27
WRKOVR:
ABNOND:

COORDINATES

NORTH: 278.9 m
SOUTH: m
EAST: m
WEST: 77.0 m
LAT: 42 47 57
LONG: 82 12 34

SAMPLES

TOP: 23.8
BOT: 185.9
TRAY: 6683

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
219	53.6	25.0	SHO	0
177.8	NA	137.0	SHO	137.0
139.7	34.2	162.0	CEM	0
60.3	NA	164.0	PAC	0

COMPLETION DATA

GAS: $10^3 m^3/d$
OIL: m^3/d
SIP: kPa
FORM: Lucas
INTRVL: 160.0-164.0 m
173.7-174.6 m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
160.0 – 182.9	PRMS	CMPL
–		
–		
–		
–		
–		

PERF ☐ OPEN HOLE ☒

REMARKS

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
22.0 – 23.0	NA	FRE
163.0 – 167.0	40.0	SUL
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	ANAL
–			
–			
–			
–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / LAKEHEAD EX	0.0		
	DRIFT / LAKE RIDGEWAY	1.6		
DEVONIAN	PORT LAMBTON			
DEVONIAN	KETTLE POINT	22.0		
DEVONIAN	HAMILTON	66.5		
DEVONIAN	MARCELLUS			
DEVONIAN	DUNDEE	135.0		
DEVONIAN	COLUMBUS			
DEVONIAN	LUCAS	158.0		
DEVONIAN	AMHERSTBURG			
DEVONIAN	SYLVANIA			
DEVONIAN	BOIS BLANC			
DEVONIAN	SPRINGVALE			
DEVONIAN	ORISKANY			
SILURIAN	BASS ISLANDS			
SILURIAN	G SHALE			
SILURIAN	F SHALE			
SILURIAN	F SALT			
SILURIAN	E CARBONATE			
SILURIAN	D SALT/EQUIVALENT			
SILURIAN	C SHALE			
SILURIAN	B MARKER			
SILURIAN	B EQUIVALENT			
SILURIAN	B SALT			
SILURIAN	B ANHYDRITE			
SILURIAN	A2 CARBONATE			
SILURIAN	A2 SALT			
SILURIAN	A2 ANHYDRITE			
SILURIAN	A1 CARBONATE			
SILURIAN	A1 SALT			
SILURIAN	A1 ANHYDRITE			
SILURIAN	GUELPH			
SILURIAN	ERAMOSA			
SILURIAN	GOAT ISLAND			
SILURIAN	GASPORT/WIARTON			
SILURIAN	DECEW			
SILURIAN	ROCHESTER			
SILURIAN	IRONDEQUOIT			
SILURIAN	REYNALES/FOSSIL HILL			
SILURIAN	THOROLD			
SILURIAN	GRIMSBY			
SILURIAN	CABOT HEAD			
SILURIAN	MANITOULIN			
SILURIAN	WHIRLPOOL			
ORDOVICIAN	QUEENSTON			
ORDOVICIAN	BLUE MOUNTAIN - GEORG BAY			
ORDOVICIAN	COLLINGWOOD			
ORDOVICIAN	COBOURG			
ORDOVICIAN	VERULAM			
ORDOVICIAN	KIRKFIELD			
ORDOVICIAN	COBOCONK			
ORDOVICIAN	GULL RIVER			
ORDOVICIAN	SHADOW LAKE			
CAMBRIAN	CAMBRIAN			
PRECAMBRIAN	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY: Lambton TWP: Dawn BLK: TRAC: 5 LOT: 26 CON: X

WELL NAME: Goldpatch 2 Dawn 5-26-X PERMIT: 7309 INIT CLASS: NPW

OPERATOR: PPC Oil and Gas Corp. TARGET: SAL CUR STATUS: DH-ABD

DRILLING DATA

CONTRACTOR: Eagle Drilling Services Inc.
RIG TYPE: Rotary
CABLE TOP:
BOT:
ROTRY TOP: 2.5
BOT: 610.7
DRLG FLD:

DEPTHS
KB ELEV: 203.7
LOGGER: 610.7
DRILLER: 610.7
DEEP END:
PLUG BK:

DATES

PERMIT: 1988-05-19
SPUD: 1988-05-19
COMPTD: 1988-06-01
OFFCNF: 1989-06-01
WRKOVR:
ABNOND: 1988-06-02

COORDINATES

NORTH: 64.8 m
SOUTH: m
EAST: 563.9 m
WEST: m
LAT: 42 42 40
LONG: 82 05 00

SAMPLES

TOP: 17.0
BOT: 611.0
TRAY: 3339

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
--		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244	53.4	43.8	CEM	0
178	29.8	354.0	CEM	238.5

COMPLETION DATA

GAS: $10^3 m^3/d$
OIL: m^3/d
SIP: kPa
FORM:
INTRVL: m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
15.0 – 610.0	GRNL	SCH
345.0 – 610.0	DENL	"
345.0 – 610.0	PEF	"
333.2 – 610.7	DLLM	"
–		
–		
–		

PERF ☐ OPEN HOLE ☐

REMARKS

A-2 Shale at 508.8

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
135.0 – 140.0	NA	SUL
572.0 – 574.5	NA	SAL
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	ANAL
–			
–			
–			
–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / LAKEHEAD EX	0.0		
	DRIFT / LAKE RIDGEWAY	2.5		
DEVONIAN	PORT LAMBTON			
DEVONIAN	KETTLE POINT	17.0		
DEVONIAN	HAMILTON	39.9		
DEVONIAN	MARCELLUS			
DEVONIAN	DUNDEE	114.0		
DEVONIAN	COLUMBUS			
DEVONIAN	LUCAS	137.0		
DEVONIAN	AMHERSTBURG	201.0		
DEVONIAN	SYLVANIA			
DEVONIAN	BOIS BLANC	262.0		
DEVONIAN	SPRINGVALE			
DEVONIAN	ORISKANY			
SILURIAN	BASS ISLANDS	289.0		
SILURIAN	G SHALE	331.7		
SILURIAN	F SHALE	337.5		
SILURIAN	F SALT			
SILURIAN	E CARBONATE	380.5		
SILURIAN	D SALT/EQUIVALENT			
SILURIAN	C SHALE	411.1		
SILURIAN	B MARKER	423.9		
SILURIAN	B EQUIVALENT			
SILURIAN	B SALT	435.1		
SILURIAN	B ANHYDRITE			
SILURIAN	A2 CARBONATE	475.0		
SILURIAN	A2 SALT	517.0		
SILURIAN	A2 ANHYDRITE	525.0		
SILURIAN	A1 CARBONATE	526.2		
SILURIAN	A1 SALT			
SILURIAN	A1 ANHYDRITE	563.6		
SILURIAN	GUELPH	569.3		
SILURIAN	ERAMOSA			
SILURIAN	GOAT ISLAND	576.9		
SILURIAN	GASPORT/WIARTON	588.0		
SILURIAN	DECEW			
SILURIAN	ROCHESTER			
SILURIAN	IRONDEQUOIT			
SILURIAN	REYNALES/FOSSIL HILL			
SILURIAN	THOROLD			
SILURIAN	GRIMSBY			
SILURIAN	CABOT HEAD			
SILURIAN	MANITOULIN			
SILURIAN	WHIRLPOOL			
ORDOVICIAN	QUEENSTON			
ORDOVICIAN	BLUE MOUNTAIN - GEORG BAY			
ORDOVICIAN	COLLINGWOOD			
ORDOVICIAN	COBOURG			
ORDOVICIAN	VERULAM			
ORDOVICIAN	KIRKFIELD			
ORDOVICIAN	COBOCONK			
ORDOVICIAN	GULL RIVER			
ORDOVICIAN	SHADOW LAKE			
CAMBRIAN	CAMBRIAN			
PRECAMBRIAN	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

T.R. Carter

CTY Lambton TWP Dawn BLK TRAC 4 LOT 26 CON XIII
WELL NAME Goldpatch 1 Dawn 4-26-XIII PERMIT 7308 INIT CLASS NPW
OPERATOR PPC Oil and Gas Corp. TARGET SAL CUR STATUS OS-ABD

DRILLING DATA
CONTRACTOR Rawlings Drilling Co.
RIG TYPE Cable DEPTHS
CABLE TOP 0.9 KB ELEV 202.6
BOT 583.7 LOGGER 581.0
ROTRY TOP DRILLER 583.7
BOT DEEP END
DRLG FLD PLUG BK

DATES
PERMIT 1988-05-19
SPUD 1988-05-27
COMPTD 1988-07-19
OFFCNF 1989-07-19
WRKOVR
ABNDND 1988-07-26

COORDINATES
NORTH 107.0 m
SOUTH m
EAST m
WEST 442.3 m
LAT 42 44 35
LONG 82 01 44

SAMPLES
TOP 15.5
BOT 583.7
TRAY 9226

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
273	60.4	15.8	SHO	15.8
219	35.8	109.7	SHO	109.7
178	29.8	327.7	CEM	230.1

COMPLETION DATA
GAS $10^3 m^3/d$
OIL m^3/d
SIP kPa
FORM
INTRVL m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
515.1 – 518.0	Show	HVY
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
10.0 – 580.3	GRNL	SCH
300.0 – 580.3	PEF	"
300.0 – 580.3	LDT	"
10.0 – 578.0	SONL	"
327.5 – 580.2	DLLM	"
–		
–		

PERF ☐ OPEN HOLE ☐

REMARKS
A-2 Shale at 500.7

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
15.5 –	NA	FRE
18.9 –	6.1	FRE
128.0 –	21.3	SUL
515.1 – 518.0	459.0	SAL
566.9 – 570.0	417.6	SAL
–		

CORING RECORD

INTERVAL	LOCATION	NO	ANAL
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS

		TOP	ELEV	THICK
	KB / [illegible]	0.0		
	DRIFT / [illegible]	0.9		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT	15.8		
	HAMILTON	37.2		
	MARCELLUS			
	DUNDEE	108.3		
	COLUMBUS			
	LUCAS	141.0		
	AMHERSTBURG	190.0		
	SYLVANIA			
	BOIS BLANC	249.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	267.0		
	G SHALE	303.3		
	F SHALE	310.2		
	F SALT			
	E CARBONATE	353.0		
	D SALT/EQUIVALENT			
	C SHALE	380.0		
	B MARKER	390.7		
	B EQUIVALENT			
	B SALT	401.7		
	B ANHYDRITE			
	A2 CARBONATE	466.7		
	A2 SALT	509.1		

	A2 ANHYDRITE	511.2		
	A1 CARBONATE	512.6		
	A1 SALT			
	A1 ANHYDRITE	549.9		
	GUELPH	556.0		
	ERAMOSA			
	GOAT ISLAND	564.2		
	GASPORT/WIARTON	572.0		
	DECEW			
	ROCHESTER			
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL			
	THOROLD			
	GRIMSBY			
	CABOT HEAD			
	MANITOULIN			
	WHIRLPOOL			
	QUEENSTON			
	BLUE MOUNTAIN - GEORG BAY			
	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
	CAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY: E.E. Carter

CTY Lambton TWP Dawn BLK TRAC 1 LOT 28 CON I
WELL NAME Forbes 45 Dawn 1-28-1 PERMIT 7221 INIT CLASS NPW
OPERATOR Forbes Resources Inc. TARGET SAL CUR STATUS OS-ABD

DRILLING DATA
CONTRACTOR James Newport Drilling Services
RIG TYPE Cable DEPTHS
CABLE TOP 1.2 KB ELEV 191.6
BOT 616.0 LOGGER
ROTRY TOP DRILLER 616.0
BOT DEEP END
DRLG FLD PLUG BK

DATES
PERMIT 1988-01-06
SPUD 1988-01-13
COMPTD 1988-02-11
OFFCNF 1989-02-11
WRKOVR
ABNDND 1988-02-15

COORDINATES
NORTH 107.0 m
SOUTH m
EAST m
WEST 228.0 m
LAT 42 43 33
LONG 82 13 43

SAMPLES
TOP 24
BOT 616
TRAY 9203

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
273	60.3	24.9	SHO	24.9
219	35.7	137.0	SHO	137.0
178	29.8	336.0	CEM	267.3

COMPLETION DATA
GAS $10^3 m^3/d$
OIL m^3/d
SIP kPa
FORM
INTRVL m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
616.0 –	Show	NA
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
–		
–		
–		
–		
–		
–		

PERF ☐ OPEN HOLE ☐

REMARKS
A-2 Shale at 536.5

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
22.0 –		FRE
163.0 – 166.0	60.0	SUL
616.0 –	571.0	SAL
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	ANAL
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS

		TOP	ELEV	THICK
	KB / [illegible]	0.0		
	DRIFT / [illegible]	1.2		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT	24.0		
	HAMILTON	63.0		
	MARCELLUS			
	DUNDEE	134.0		
	COLUMBUS			
	LUCAS	157.0		
	AMHERSTBURG	222.0		
	SYLVANIA			
	BOIS BLANC	267.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	285.5		
	G SHALE	330.0		
	F SHALE	337.0		
	F SALT			
	E CARBONATE	378.5		
	D SALT/EQUIVALENT			
	C SHALE	410.0		
	B MARKER	423.0		
	B EQUIVALENT			
	B SALT	427.0		
	B ANHYDRITE			
	A2 CARBONATE	505.0		
	A2 SALT	543.0		

	A2 ANHYDRITE			
	A1 CARBONATE	567.0		
	A1 SALT			
	A1 ANHYDRITE	601.0		
	GUELPH	607.5		
	ERAMOSA			
	GOAT ISLAND	613.0		
	GASPORT/WIARTON			
	DECEW			
	ROCHESTER			
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL			
	THOROLD			
	GRIMSBY			
	CABOT HEAD			
	MANITOULIN			
	WHIRLPOOL			
	QUEENSTON			
	BLUE MOUNTAIN - GEORG BAY			
	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
	CAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Lambton TWP Dawn BLK TRAC 6 LOT 30 CON I

WELL NAME Union Dawn 269 Dawn 6-30-I PERMIT 7401 INIT CLASS OBS

OPERATOR Union Gas Ltd TARGET SAL CUR STATUS OBS

DRILLING DATA

CONTRACTOR James Newport Drilling

RIG TYPE Cable DEPTHS

CABLE TOP 1.4 KB ELEV 192.1

BOT 620.0 LOGGER 619.0

ROTRY TOP DRILLER 620.0

BOT DEEP END

DRLG FLD PLUG BK

DATES

PERMIT 1988-09-27

SPUD 1988-10-25

COMPTD 1988-12-04

OFFCNF 1989-01-03

WRKOVR

ABNDND

COORDINATES

NORTH m

SOUTH 203.8 m

EAST 435.0 m

WEST m

LAT 42 44 22

LONG 82 14 11

SAMPLES

TOP 23.0

BOT 620.0

TRAY 9503-04

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
340	71.4	24.5	SHO	0
273	60.3	157.6	SHO	157.6
219	35.7	372.7	CEM	0
140	20.8	618.4	CEM	0

COMPLETION DATA

GAS $10^3m^3/d$

OIL m^3/d

SIP kPa

FORM

INTRVL m

m

m

PERF ☒ OPEN HOLE ☐

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
0.0 – 618.4	GRNL	Atlas Wire.
0.0 – 611.2	VERL	"
372.4 – 618.5	DENL	"
369.0 – 618.5	DLL	"
370.0 – 618.3	DIFS	"
0.0 – 611.1	CBND	CMPL
–		

REMARKS

A-2 Shale at 547.1

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
23.0 –	NA	FRE
161.0 – 164.0	42.0	SUL
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB /~~LAKE BOTTOM~~	0.0		
	DRIFT /~~LAKE BOTTOM~~	1.4		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT	27.0		
	HAMILTON	84.3		
	MARCELLUS			
	DUNDEE	155.7		
	COLUMBUS			
	LUCAS	183.0		
	AMHERSTBURG	253.0		
	SYLVANIA			
	BOIS BLANC	294.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	317.5		
	G SHALE	358.9		
	F SHALE	365.1		
	F SALT			
	E CARBONATE	408.0		
	D SALT/EQUIVALENT			
	C SHALE	436.6		
	B MARKER	449.7		
	B EQUIVALENT			
	B SALT	462.0		
	B ANHYDRITE			
	A2 CARBONATE	511.5		
	A2 SALT	555.0		

	A2 ANHYDRITE	574.5
	A1 CARBONATE	576.4
	A1 SALT	
	A1 ANHYDRITE	612.9
	GUELPH	619.5
	ERAMOSA	
	GOAT ISLAND	
	GASPORT/WIARTON	
	DECEW	
	ROCHESTER	
	IRONDEQUOIT	
	REYNALES/FOSSIL HILL	
	THOROLD	
	GRIMSBY	
	CABOT HEAD	
	MANITOULIN	
	WHIRLPOOL	
	QUEENSTON	
ORDOVICIAN	BLUE MOUNTAIN - GEORG. BAY	
	COLLINGWOOD	
	COBOURG	
	VERULAM	
	KIRKFIELD	
	COBOCONK	
	GULL RIVER	
	SHADOW LAKE	
CAMBRIAN		
PRECAMBRIAN		

GEOLOGY BY: T.R. Carter

CTY Lambton TWP Dawn BLK TRAC 2 LOT 32 CON II

WELL NAME Union Dawn 270 Dawn 2-32-II PERMIT 7402 INIT CLASS OBS

OPERATOR Union Gas Ltd TARGET SAL CUR STATUS OBS

DRILLING DATA

CONTRACTOR James Newport Drilling

RIG TYPE Cable DEPTHS

CABLE TOP 1.2 KB ELEV 194.3

BOT 607.5 LOGGER 607.8

ROTRY TOP DRILLER 607.5

BOT DEEP END

DRLG FLD PLUG BK

DATES

PERMIT 1988-09-27

SPUD 1988-10-18

COMPTD 1988-11-29

OFFCNF 1988-12-29

WRKOVR

ABNDND

COORDINATES

NORTH m

SOUTH 197.0 m

EAST m

WEST 305.0 m

LAT 42 45 02

LONG 82 12 39.5

SAMPLES

TOP 21.0

BOT 607.5

TRAY 9499-9500

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
571.0 – 584.0	Show	NA
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
340	71.4	22.1	SHO	0
273	60.3	151.7	SHO	151.7
219	35.7	396.7	CEM	0
140	24.0	607.7	CEM	0

COMPLETION DATA

GAS 1.5 $10^3m^3/d$

OIL m^3/d

SIP kPa

FORM

INTRVL m

m

m

PERF ☐ OPEN HOLE ☒

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
397.0 – 607.0	GRNL	SCH
397.0 – 607.0	PEF	"
397.0 – 607.0	LDT	"
397.0 – 607.0	DLLM	"
450.0 – 601.1	GRNL	CMPL
0.0 – 602.1	CBND	"
0.0 – 599.9	VERL	Atlas-Wire.

REMARKS

A-2 Shale at 540.8

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
21.0 –	NA	FRE
161.0 – 164.0	116.0	SUL
209.0 –	60.0	SUL
256.0 –	45.0	SUL
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB /~~LAKE BOTTOM~~	0.0		
	DRIFT /~~LAKE BOTTOM~~	1.2		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT	21.0		
	HAMILTON	58.4		
	MARCELLUS			
	DUNDEE	149.3		
	COLUMBUS			
	LUCAS	185.0		
	AMHERSTBURG	255.0		
	SYLVANIA			
	BOIS BLANC	317.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	341.0		
	G SHALE	385.9		
	F SHALE	392.2		
	F SALT			
	E CARBONATE	436.8		
	D SALT/EQUIVALENT			
	C SHALE	463.8		
	B MARKER	486.2		
	B EQUIVALENT			
	B SALT			
	B ANHYDRITE	501.0		
	A2 CARBONATE	506.0		
	A2 SALT	549.0		

	A2 ANHYDRITE	571.8
	A1 CARBONATE	573.1
	A1 SALT	
	A1 ANHYDRITE	606.0
	GUELPH	
	ERAMOSA	
	GOAT ISLAND	
	GASPORT/WIARTON	
	DECEW	
	ROCHESTER	
	IRONDEQUOIT	
	REYNALES/FOSSIL HILL	
	THOROLD	
	GRIMSBY	
	CABOT HEAD	
	MANITOULIN	
	WHIRLPOOL	
	QUEENSTON	
ORDOVICIAN	BLUE MOUNTAIN - GEORG. BAY	
	COLLINGWOOD	
	COBOURG	
	VERULAM	
	KIRKFIELD	
	COBOCONK	
	GULL RIVER	
	SHADOW LAKE	
CAMBRIAN		
PRECAMBRIAN		

GEOLOGY BY: T.R. Carter

T.R. Carter

CTY Lambton TWP Dawn BLK TRAC 6 LOT 33 CON VI

WELL NAME Cadington Res. et al 2 Dawn 6-33-VI PERMIT 7306 INIT CLASS NPW

OPERATOR PPC Oil and Gas Corp TARGET SAL CUR STATUS GS-ABD

DRILLING DATA				DATES		COORDINATES			SAMPLES
CONTRACTOR	Corunna Drilling Ltd			PERMIT	1988-05-16	NORTH	330.0	m	TOP 36.0
RIG TYPE	Rotary	DEPTHS		SPUD	1988-10-12	SOUTH		m	BOT 644.0
CABLE TOP		KB ELEV	203.1	COMPTD	1988-10-17	EAST	505.0	m	TRAY 9287
BOT		LOGGER	644.2	OFFCNF	1989-10-17	WEST		m	
ROTRY TOP	3.6	DRILLER	644.2	WRKOVR		LAT	42 45 14		
BOT	644.2	DEEP END		ABNDND	1988-10-18	LONG	82 09 01		
DRLG FLD		PLUG BK							

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS $10^3m^3/d$
537.0 –	SHOW	NA	244	53.6	36.0	CEM	0	OIL m^3/d
592.0 – 598.0	SHOW	NA	178	29.7	397.0	CEM	258.0	SIP kPa
602.0 –	SHOW	NA						FORM
611.0 –	SHOW	NA						INTRVL m
–								m
–								m

INITIAL OIL RECORD			LOGGING RECORD			COMPLETION DATA
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	PERF ☐ OPEN HOLE ☐
–			0.0 – 643.6	GRNL	Atlas-Wire.	REMARKS
–			–			
–			–			A-2 Shale at 536.0
–			–			
–			–			
–			–			

INITIAL WATER RECORD			CORING RECORD			
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	mm
–			–			
–			–			
–			–			
–			–			
–			–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / LUKE KELLY	0.0		
	DRIFT / LUKE BEATTOUE	3.6		
DEVONIAN	PORT LAMBTON			
DEVONIAN	KETTLE POINT	24.0		
DEVONIAN	HAMILTON	34.0		
DEVONIAN	MARCELLUS			
DEVONIAN	DUNDEE	108.3		
DEVONIAN	COLUMBUS			
DEVONIAN	LUCAS	132.0		
DEVONIAN	AMHERSTBURG	204.0		
DEVONIAN	SYLVANIA			
DEVONIAN	BOIS BLANC	258.0		
DEVONIAN	SPRINGVALE			
DEVONIAN	ORISKANY			
SILURIAN	BASS ISLANDS	276.0		
SILURIAN	G SHALE	320.3		
SILURIAN	F SHALE	326.9		
SILURIAN	F SALT			
SILURIAN	E CARBONATE	370.9		
SILURIAN	D SALT/EQUIVALENT			
SILURIAN	C SHALE	406.9		
SILURIAN	B MARKER	418.4		
SILURIAN	B EQUIVALENT			
SILURIAN	B SALT	424.6		
SILURIAN	B ANHYDRITE			
SILURIAN	A2 CARBONATE	502.5		
SILURIAN	A2 SALT	544.0		
SILURIAN	A2 ANHYDRITE	559.0		
SILURIAN	A1 CARBONATE	561.0		
SILURIAN	A1 SALT			
SILURIAN	A1 ANHYDRITE	601.2		
SILURIAN	GUELPH	604.7		
SILURIAN	ERAMOSA			
SILURIAN	GOAT ISLAND	611.5		
SILURIAN	GASPORT/WARTON	622.5		
SILURIAN	DECEW			
SILURIAN	ROCHESTER	637.6		
SILURIAN	IRONDEQUOIT			
SILURIAN	REYNALES/FOSSIL HILL			
SILURIAN	THOROLD			
SILURIAN	GRIMSBY			
SILURIAN	CABOT HEAD			
SILURIAN	MANITOULIN			
SILURIAN	WHIRLPOOL			
ORDOVICIAN	QUEENSTON			
ORDOVICIAN	BLUE MOUNTAIN - GEORG BAY			
ORDOVICIAN	COLLINGWOOD			
ORDOVICIAN	COBOURG			
ORDOVICIAN	VERULAM			
ORDOVICIAN	KIRKFIELD			
ORDOVICIAN	COBOCONK			
ORDOVICIAN	GULL RIVER			
ORDOVICIAN	SHADOW LAKE			
CAMBRIAN	CAMBRIAN			
PRECAMBRIAN	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Lambton TWP Dawn BLK TRAC LOT 33 CON XIII

WELL NAME Union Dawn 267 Dawn 33-XIII PERMIT 7367 INIT CLASS OBS

OPERATOR Union Gas Ltd TARGET SAL CUR STATUS OBS

DRILLING DATA				DATES		COORDINATES			SAMPLES
CONTRACTOR	James Newport Drilling			PERMIT	1988-08-04	NORTH		m	TOP 16.0
RIG TYPE	Cable	DEPTHS		SPUD	1988-08-22	SOUTH	221.0	m	BOT 589.0
CABLE TOP	1.2	KB ELEV	205.1	COMPTD	1988-10-03	EAST		m	TRAY 9506-
BOT	589.0	LOGGER	588.9	OFFCNF	1988-11-02	WEST	487.0	m	07
ROTRY TOP		DRILLER	589.0	WRKOVR		LAT	42 45 05		
BOT		DEEP END		ABNDND		LONG	82 01 39		
DRLG FLD		PLUG BK							

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS $10^3m^3/d$
–			340	71.4	17.1	SHO	0	OIL m^3/d
–			273	60.3	136.3	SHO	136.3	SIP kPa
–			219	35.7	381.5	CEM	0	FORM
–			140	20.8	588.7	CEM	0	INTRVL m
–								m
–								m

INITIAL OIL RECORD			LOGGING RECORD			COMPLETION DATA
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	PERF ☒ OPEN HOLE ☐
–			381.7 – 588.3	GRNL	Atlas Wire.	REMARKS
–			0.0 – 574.8	VERL	"	
–			381.7 – 588.3	DENL	"	A-2 Shale at 529.1
–			0.0 – 576.3	CBND	CMPL	
–			–			
–			–			

INITIAL WATER RECORD			CORING RECORD			
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	mm
17.0 –	NA	FRE	–			
166.0 –	80.0	SUL	–			
240.0 –	60.0	SUL	–			
260.0 –	40.0	SUL	–			
552.0 –	NA	SAL	–			
–			–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / LUKE KELLY	0.0		
	DRIFT / LUKE BEATTOUE	1.2		
DEVONIAN	PORT LAMBTON			
DEVONIAN	KETTLE POINT	16.0		
DEVONIAN	HAMILTON	49.9		
DEVONIAN	MARCELLUS			
DEVONIAN	DUNDEE	131.8		
DEVONIAN	COLUMBUS			
DEVONIAN	LUCAS	159.5		
DEVONIAN	AMHERSTBURG	233.0		
DEVONIAN	SYLVANIA			
DEVONIAN	BOIS BLANC	279.0		
DEVONIAN	SPRINGVALE			
DEVONIAN	ORISKANY			
SILURIAN	BASS ISLANDS	326.5		
SILURIAN	G SHALE	373.4		
SILURIAN	F SHALE	380.0		
SILURIAN	F SALT			
SILURIAN	E CARBONATE	421.1		
SILURIAN	D SALT/EQUIVALENT			
SILURIAN	C SHALE	448.9		
SILURIAN	B MARKER	459.1		
SILURIAN	B EQUIVALENT			
SILURIAN	B SALT	474.0		
SILURIAN	B ANHYDRITE			
SILURIAN	A2 CARBONATE	495.3		
SILURIAN	A2 SALT			
SILURIAN	A2 ANHYDRITE	536.0		
SILURIAN	A1 CARBONATE	540.0		
SILURIAN	A1 SALT			
SILURIAN	A1 ANHYDRITE	575.0		
SILURIAN	GUELPH	578.4		
SILURIAN	ERAMOSA			
SILURIAN	GOAT ISLAND			
SILURIAN	GASPORT/WARTON			
SILURIAN	DECEW			
SILURIAN	ROCHESTER			
SILURIAN	IRONDEQUOIT			
SILURIAN	REYNALES/FOSSIL HILL			
SILURIAN	THOROLD			
SILURIAN	GRIMSBY			
SILURIAN	CABOT HEAD			
SILURIAN	MANITOULIN			
SILURIAN	WHIRLPOOL			
ORDOVICIAN	QUEENSTON			
ORDOVICIAN	BLUE MOUNTAIN - GEORG BAY			
ORDOVICIAN	COLLINGWOOD			
ORDOVICIAN	COBOURG			
ORDOVICIAN	VERULAM			
ORDOVICIAN	KIRKFIELD			
ORDOVICIAN	COBOCONK			
ORDOVICIAN	GULL RIVER			
ORDOVICIAN	SHADOW LAKE			
CAMBRIAN	CAMBRIAN			
PRECAMBRIAN	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Lambton TWP Dawn BLK TRAC LOT 34 CON XIII
WELL NAME Union Dawn 265 Dawn 34-XIII PERMIT 7313 INIT CLASS NGS
OPERATOR Union Gas Ltd TARGET SAL CUR STATUS NGS

DRILLING DATA

CONTRACTOR Charles Shaw Drilling
RIG TYPE Cable DEPTHS
CABLE TOP 1.4 KB ELEV 205.2
BOT 520.0 LOGGER 520.0
ROTRY TOP DRILLER 520.0
BOT DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-05-19
SPUD 1988-08-02
COMPTD 1988-09-16
OFFCNF 1988-10-16
WRKOVR
ABNDND

COORDINATES

NORTH m
SOUTH 77.0 m
EAST 380.4 m
WEST m
LAT 42 45 25
LONG 82 01 57

SAMPLES

TOP 13.0
BOT 520.0
TRAY 9504

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
457.0 –	Show	NA
481.0 – 520.0	NA	6700
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
340	71.4	14.8	SHO	0
273	60.3	121.6	SHO	121.6
219	35.7	365.4	CEM	0
178	29.8	471.8	CEM	0

COMPLETION DATA

GAS NA $10^3m^3/d$
OIL m^3/d
SIP 6700 kPa
FORM Guelph
INTRVL 481.0-520.0 m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
0.0 – 519.4	GRNL	Atlas Wire.
0.0 – 469.0	VERL	"
471.0 – 519.5	DENL	"
0.0 – 450.0	CBND	CMPL
0.0 – 450.0	CCL	"
–		
–		

PERF ☐ OPEN HOLE ☑

REMARKS

A-2 Shale at 476.0

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
12.5 –	8.0	FRE
155.0 –	60.0	SUL
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / LAKEVIEW	0.0		
DRIFT / LAKEVIEW	1.4		
PORT LAMBTON			
KETTLE POINT	13.0		
HAMILTON	40.5		
MARCELLUS			
DUNDEE	116.8		
COLUMBUS			
LUCAS	135.0		
AMHERSTBURG	221.0		
SYLVANIA			
BOIS BLANC	265.0		
SPRINGVALE			
ORISKANY			
BASS ISLANDS	313.5		
G SHALE	354.3		
F SHALE	360.5		
F SALT			
E CARBONATE	401.3		
D SALT/EQUIVALENT			
C SHALE	423.0		
B MARKER	438.1		
B EQUIVALENT			
B SALT			
B ANHYDRITE	454.7		
A2 CARBONATE	457.6		
A2 SALT			
A2 ANHYDRITE	479.0		
A1 CARBONATE			
A1 SALT			
A1 ANHYDRITE			
GUELPH	480.3		
ERAMOSA			
GOAT ISLAND			
GASPORT/MARTON			
DECEW			
ROCHESTER			
IRONDEQUOIT			
REYNALES/FOSSIL HILL			
THOROLD			
GRIMSBY			
CABOT HEAD			
MANITOULIN			
WHIRLPOOL			
QUEENSTON			
BLUE MOUNTAIN - GEORG. BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Lambton TWP Dawn BLK TRAC LOT 34 CON XIII
WELL NAME Union Dawn 266 Dawn 34-XIII PERMIT 7314 INIT CLASS NGS
OPERATOR Union Gas Ltd TARGET SAL CUR STATUS NGS

DRILLING DATA

CONTRACTOR James Newport Drilling
RIG TYPE Cable DEPTHS
CABLE TOP 1.5 KB ELEV 205.4
BOT 515.0 LOGGER 513.9
ROTRY TOP DRILLER 515.0
BOT DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-05-19
SPUD 1988-08-02
COMPTD 1988-09-13
OFFCNF 1988-10-13
WRKOVR
ABNDND

COORDINATES

NORTH m
SOUTH 77.0 m
EAST 550.4 m
WEST m
LAT 42 45 25
LONG 82 01 49

SAMPLES

TOP 12.0
BOT 515.0
TRAY 9431

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
464.0 –	NA	NA
483.0 – 512.0	NA	7100
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
340	71.4	12.4	SHO	0
273	60.3	120.1	SHO	120.1
219	35.7	364.6	CEM	0
178	29.8	479.8	CEM	0

COMPLETION DATA

GAS NA $10^3m^3/d$
OIL m^3/d
SIP 7100 kPa
FORM Guelph
INTRVL 488.0-515.0 m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
0.0 – 513.3	GRNL	AtlasWire.
0.0 – 477.2	VERL	"
480.0 – 513.4	DENL	"
0.0 – 462.1	CBND	CMPL
0.0 – 462.1	CCL	"
–		
–		

PERF ☐ OPEN HOLE ☑

REMARKS

A-2 Shale at 485.0

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
150.0 – 153.0	60.0	SUL
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / LAKEVIEW	0.0		
DRIFT / LAKEVIEW	1.5		
PORT LAMBTON			
KETTLE POINT	13.0		
HAMILTON	41.8		
MARCELLUS			
DUNDEE	118.5		
COLUMBUS			
LUCAS	141.0		
AMHERSTBURG	221.0		
SYLVANIA			
BOIS BLANC	268.0		
SPRINGVALE			
ORISKANY			
BASS ISLANDS	314.0		
G SHALE	356.8		
F SHALE	363.7		
F SALT			
E CARBONATE	405.5		
D SALT/EQUIVALENT			
C SHALE	429.0		
B MARKER	447.5		
B EQUIVALENT			
B SALT			
B ANHYDRITE	463.3		
A2 CARBONATE	465.5		
A2 SALT			
A2 ANHYDRITE	486.0		
A1 CARBONATE			
A1 SALT			
A1 ANHYDRITE			
GUELPH	487.1		
ERAMOSA			
GOAT ISLAND			
GASPORT/MARTON			
DECEW			
ROCHESTER			
IRONDEQUOIT			
REYNALES/FOSSIL HILL			
THOROLD			
GRIMSBY			
CABOT HEAD			
MANITOULIN			
WHIRLPOOL			
QUEENSTON			
BLUE MOUNTAIN - GEORG. BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

T.R. Carter

CTY	Lambton	TWP	Dawn	BLK	TRAC	LOT	34	CON	XIII
WELL NAME	Union Dawn 268	Dawn 34-XIII		PERMIT	7368	INIT CLASS	OBS		
OPERATOR	Union Gas Ltd			TARGET	SAL	CUR STATUS	OBS		

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	Charles Shaw Drilling			PERMIT	1988-08-04	NORTH		m	TOP	15.0
RIG TYPE	Cable	DEPTHS		SPUD	1988-09-27	SOUTH	318.4	m	BOT	578.0
CABLE TOP	1.5	KB ELEV	205.6	COMPTD	1988-11-04	EAST		m	TRAY	9498
BOT	579.8	LOGGER	579.8	OFFCNF	1988-12-04	WEST	244.0	m		
ROTRY TOP		DRILLER	579.8	WRKOVR		LAT	42 45 16			
BOT		DEEP END		ABNDND		LONG	82 01 28			
DRLG FLD		PLUG BK								

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS	$10^3 m^3/d$
–			340	71.4	15.8	SHO	0	OIL	m^3/d
–			273	60.3	146.9	SHO	146.9	SIP	kPa
–			219	35.7	397.9	CEM	0	FORM	
–			140	20.8	379.8	CEM	0	INTRVL	m
–									m
–									m

INITIAL OIL RECORD			LOGGING RECORD			COMPLETION DATA	
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	PERF ☒	OPEN HOLE ☐
–			0.0 – 579.2	GRNL	Atlas Wire.	REMARKS	
–			0.0 – 569.2	VERL	"		
–			390.0 – 579.2	DENL	"	A-2 Shale at 529.0	
–			394.0 – 576.3	DLL	"		
–			0.0 – 570.2	CBND	CMPL		
–			–				

INITIAL WATER RECORD			CORING RECORD				
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	mm	
15.0 –	NA	FRE	–				
173.0 –	60.0	SUL	–				
550.0 –	NA	SAL	–				
–			–				
–			–				
–			–				

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / [redacted]	0.0		
	DRIFT [redacted]	1.5		
DEVONIAN	PORT LAMBTON			
DEVONIAN	KETTLE POINT	16.0		
DEVONIAN	HAMILTON	57.8		
DEVONIAN	MARCELLUS			
DEVONIAN	DUNDEE	145.2		
DEVONIAN	COLUMBUS	177.0		
DEVONIAN	LUCAS	179.0		
DEVONIAN	AMHERSTBURG	249.0		
DEVONIAN	SYLVANIA			
DEVONIAN	BOIS BLANC	304.0		
DEVONIAN	SPRINGVALE			
DEVONIAN	ORISKANY			
SILURIAN	BASS ISLANDS	343.0		
SILURIAN	G SHALE	386.1		
SILURIAN	F SHALE	392.5		
SILURIAN	F SALT			
SILURIAN	E CARBONATE	434.9		
SILURIAN	D SALT/EQUIVALENT			
SILURIAN	C SHALE	459.4		
SILURIAN	B MARKER	473.1		
SILURIAN	B EQUIVALENT			
SILURIAN	B SALT	488.0		
SILURIAN	B ANHYDRITE			
SILURIAN	A2 CARBONATE	497.0		
SILURIAN	A2 SALT			

		TOP	ELEV	THICK
SILURIAN	A2 ANHYDRITE	536.5		
SILURIAN	A1 CARBONATE	539.8		
SILURIAN	A1 SALT			
SILURIAN	A1 ANHYDRITE	575.0		
SILURIAN	GUELPH	579.2		
SILURIAN	ERAMOSA			
SILURIAN	GOAT ISLAND			
SILURIAN	GASPORT/WIARTON			
SILURIAN	DECEW			
SILURIAN	ROCHESTER			
SILURIAN	IRONDEQUOIT			
SILURIAN	REYNALES/FOSSIL HILL			
SILURIAN	THOROLD			
SILURIAN	GRIMSBY			
SILURIAN	CABOT HEAD			
SILURIAN	MANITOULIN			
ORDOVICIAN	WHIRLPOOL			
ORDOVICIAN	QUEENSTON			
ORDOVICIAN	BLUE MOUNTAIN - GEORG. BAY			
ORDOVICIAN	COLLINGWOOD			
ORDOVICIAN	COBOURG			
ORDOVICIAN	VERULAM			
ORDOVICIAN	KIRKFIELD			
ORDOVICIAN	COBOCONK			
ORDOVICIAN	GULL RIVER			
ORDOVICIAN	SHADOW LAKE			
CAMBRIAN	CAMBRIAN			
PRECAMBRIAN	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY	Lambton	TWP	Enniskillen	BLK	3	TRAC	4	LOT	10	CON	XI
WELL NAME	Stevenson Disposal Enniskillen 3-4-10-XI			PERMIT	7328	INIT CLASS	BD				
OPERATOR	625052 Ontario Limited			TARGET	DEV	CUR STATUS	OSBD-ABD				

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	Southwest Well Servicing Ltd			PERMIT	1988-06-20	NORTH		m	TOP	28.0
RIG TYPE	Cable	DEPTHS		SPUD	1988-07-12	SOUTH	614.9	m	BOT	208.8
CABLE TOP	0.5	KB ELEV	203.9	COMPTD	1988-07-27	EAST	368.0	m	TRAY	7870
BOT	208.0	LOGGER		OFFCNF	1988-08-26	WEST		m		
ROTRY TOP		DRILLER	208.0	WRKOVR		LAT	42 54 02			
BOT		DEEP END		ABNDND	1988-08-31	LONG	82 09 48			
DRLG FLD		PLUG BK								

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS	$10^3 m^3/d$
–			273	60.3	28.0	SHO	28.0	OIL	m^3/d
–			219.1	35.7	99.1	SHO	99.1	SIP	kPa
–								FORM	
–								INTRVL	m
–									m
–									m

INITIAL OIL RECORD			LOGGING RECORD			COMPLETION DATA	
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	PERF ☐	OPEN HOLE ☐
123.4 – 143.3	Show	NA	–			REMARKS	
–			–				
–			–				
–			–				
–			–				
–			–				

INITIAL WATER RECORD			CORING RECORD				
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	mm	
123.4 –	64.6	SUL	–				
153.9 –	64.6	SUL	–				
–			–				
–			–				
–			–				
–			–				

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / [redacted]	0.0		
	DRIFT [redacted]	0.5		
DEVONIAN	PORT LAMBTON			
DEVONIAN	KETTLE POINT			
DEVONIAN	HAMILTON	28.0		
DEVONIAN	MARCELLUS			
DEVONIAN	DUNDEE	100.0		
DEVONIAN	COLUMBUS			
DEVONIAN	LUCAS	134.0		
DEVONIAN	AMHERSTBURG	204.2		
DEVONIAN	SYLVANIA			
DEVONIAN	BOIS BLANC			
DEVONIAN	SPRINGVALE			
DEVONIAN	ORISKANY			
SILURIAN	BASS ISLANDS			
SILURIAN	G SHALE			
SILURIAN	F SHALE			
SILURIAN	F SALT			
SILURIAN	E CARBONATE			
SILURIAN	D SALT/EQUIVALENT			
SILURIAN	C SHALE			
SILURIAN	B MARKER			
SILURIAN	B EQUIVALENT			
SILURIAN	B SALT			
SILURIAN	B ANHYDRITE			
SILURIAN	A2 CARBONATE			
SILURIAN	A2 SALT			

		TOP	ELEV	THICK
SILURIAN	A2 ANHYDRITE			
SILURIAN	A1 CARBONATE			
SILURIAN	A1 SALT			
SILURIAN	A1 ANHYDRITE			
SILURIAN	GUELPH			
SILURIAN	ERAMOSA			
SILURIAN	GOAT ISLAND			
SILURIAN	GASPORT/WIARTON			
SILURIAN	DECEW			
SILURIAN	ROCHESTER			
SILURIAN	IRONDEQUOIT			
SILURIAN	REYNALES/FOSSIL HILL			
SILURIAN	THOROLD			
SILURIAN	GRIMSBY			
SILURIAN	CABOT HEAD			
SILURIAN	MANITOULIN			
ORDOVICIAN	WHIRLPOOL			
ORDOVICIAN	QUEENSTON			
ORDOVICIAN	BLUE MOUNTAIN - GEORG. BAY			
ORDOVICIAN	COLLINGWOOD			
ORDOVICIAN	COBOURG			
ORDOVICIAN	VERULAM			
ORDOVICIAN	KIRKFIELD			
ORDOVICIAN	COBOCONK			
ORDOVICIAN	GULL RIVER			
ORDOVICIAN	SHADOW LAKE			
CAMBRIAN	CAMBRIAN			
PRECAMBRIAN	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Lambton TWP Enniskillen BLK TRAC 3-4 LOT 10 CON XII

WELL NAME Stevenson Test Enniskillen 3-4-10-XII PERMIT 7393 INIT CLASS STR

OPERATOR 625052 Ontario Ltd TARGET DEV CUR STATUS STR-ABD

DRILLING DATA

CONTRACTOR Southwest Well Servicing Ltd
RIG TYPE Cable DEPTHS
CABLE TOP 0.3 KB ELEV 200.6
BOT 155.4 LOGGER
ROTRY TOP DRILLER 155.4
BOT DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-09-13
SPUD 1988-09-05
COMPTD 1988-09-07
OFFCNF 1988-10-07
WRKOVR
ABNDND 1988-09-07

COORDINATES

NORTH m
SOUTH 680.5 m
EAST 452.9 m
WEST m
LAT 42 54 02
LONG 82 09 44

SAMPLES

TOP 142.6
BOT 152.4
TRAY 6688

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
118	NA	72.5	SHO	0

COMPLETION DATA

GAS 10³m³/d
OIL m³/d
SIP kPa
FORM
INTRVL m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
–		
–		
–		
–		
–		
–		

PERF ☐ OPEN HOLE ☐

REMARKS

Deepening of existing well. No samples till 142.6m.

Lucas Formation 142.6 to TD

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
153.6 – 155.4	58.0	SUL
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS

		TOP	ELEV	THICK
	KB / [illegible]	0.0		
	DRIFT / [illegible]	0.3		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON			
	MARCELLUS			
	DUNDEE			
	COLUMBUS			
	LUCAS			
	AMHERSTBURG			
	SYLVANIA			
	BOIS BLANC			
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS			
	G SHALE			
	F SHALE			
	F SALT			
	E CARBONATE			
	D SALT/EQUIVALENT			
	C SHALE			
	B MARKER			
	B EQUIVALENT			
	B SALT			
	B ANHYDRITE			
	A2 CARBONATE			
	A2 SALT			
SILURIAN	A2 ANHYDRITE			
	A1 CARBONATE			
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH			
	ERAMOSA			
	GOAT ISLAND			
	GASPORT/WARTON			
	DECEW			
	ROCHESTER			
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL			
	THOROLD			
	GRIMSBY			
	CABOT HEAD			
	MANITOULIN			
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON			
	BLUE MOUNTAIN - GEORG BAY			
	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
	CAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Lambton TWP Enniskillen BLK TRAC 3-4 LOT 10 CON XII

WELL NAME Stevenson Disposal 2 Enniskillen 3-4-10-XII PERMIT 7397 INIT CLASS BD

OPERATOR 625052 Ontario Ltd TARGET DEV CUR STATUS OS-BD

DRILLING DATA

CONTRACTOR Southwest Well Servicing Ltd
RIG TYPE Cable DEPTHS
CABLE TOP 1.0 KB ELEV 201.33
BOT 169.1 LOGGER 167.0
ROTRY TOP DRILLER 169.1
BOT DEEP END
DRLG FLD PLUG BK 167.9

DATES

PERMIT 1988-09-15
SPUD 1988-09-08
COMPTD 1988-09-17
OFFCNF 1988-10-17
WRKOVR
ABNDND

COORDINATES

NORTH m
SOUTH 681.5 m
EAST 452.9 m
WEST m
LAT 42 54 02
LONG 82 09 48

SAMPLES

TOP 21.5
BOT 161.5
TRAY 7710

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
219.1	35.7	24.7	SHO	0
177.8	29.8	148.7	CEM	0

COMPLETION DATA

GAS 10³m³/d
OIL m³/d
SIP kPa
FORM
INTRVL m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
76.2 – 81.1	Show	NA
137.2 –	Show	NA
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
0.0 – 167.0	CRNL	CMPL
146.9 – 167.0	DENL	"
0.0 – 167.0	THPL	"
–		
–		
–		
–		

PERF ☐ OPEN HOLE ☐

REMARKS

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
38.1 –	NA	FRE
153.6 – 158.5	55.8	SUL
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS

		TOP	ELEV	THICK
	KB / [illegible]	0.0		
	DRIFT / [illegible]	1.0		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON	23.8		
	MARCELLUS			
	DUNDEE	96.3		
	COLUMBUS			
	LUCAS	125.0		
	AMHERSTBURG			
	SYLVANIA			
	BOIS BLANC			
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS			
	G SHALE			
	F SHALE			
	F SALT			
	E CARBONATE			
	D SALT/EQUIVALENT			
	C SHALE			
	B MARKER			
	B EQUIVALENT			
	B SALT			
	B ANHYDRITE			
	A2 CARBONATE			
	A2 SALT			
SILURIAN	A2 ANHYDRITE			
	A1 CARBONATE			
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH			
	ERAMOSA			
	GOAT ISLAND			
	GASPORT/WARTON			
	DECEW			
	ROCHESTER			
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL			
	THOROLD			
	GRIMSBY			
	CABOT HEAD			
	MANITOULIN			
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON			
	BLUE MOUNTAIN - GEORG BAY			
	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
	CAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

T.R. Carter

CTY Lambton TWP Enniskillen BLK TRAC 3-8 LOT 11 CON XII

WELL NAME Ayrheart 1 Disp. Enniskillen 3-8-11-XII PERMIT 7319 INIT CLASS BD

OPERATOR Roy Ayrheart TARGET DEV CUR STATUS OS-BD

DRILLING DATA

CONTRACTOR Lorne Newport
RIG TYPE Cable DEPTHS
CABLE TOOL .5 KB ELEV 204.4
BOT 198.1 LOGGER 198.1
ROTRY TOOL DRILLER 198.1
BOT DEEP END
DRLG FLD PLUG BK 196.6

DATES

PERMIT 1988-05-26
SPUD 1988-06-15
COMPTD 1988-08-12
OFFCNF 1988-09-11
WRKOVR
ABNDND

COORDINATES

NORTH m
SOUTH 1194.7 m
EAST m
WEST 225.0 m
LAT 42 53 46
LONG 82 09 28

SAMPLES

TOP 27.1
BOT 198.1
TRAY 6675

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
273.1	48.7	27.1	SHO	27.1
219.1	35.7	39.6	SHO	0
177.8	29.8	102.7	SHO	102.7
139.7	20.8	149.3	CEM	0

COMPLETION DATA

GAS $10^3 m^3/d$
OIL m^3/d
SIP kPa
FORM Detroit River
INTRVL 149.3-198.1 m
m
m
PERF ☐ OPEN HOLE ☒

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
129.2 – 144.8	Show	
102.1 – 105.2	Show	
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
0.0 – 198.1	GRNL	CMPL
103.6 – 198.1	DENL	"
–		
–		
–		
–		

REMARKS

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
26.2 – 27.1	NA	FRE
102.1 – 105.2	61.0	SUL
30.2 – 30.7	12.2	FRE
155.5 – 158.5	61.0	SUL
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	ANAL
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / ~~KANCLEVEX~~	0.0		
DRIFT / ~~KANDOUTANE~~	0.5		
DEVONIAN: PORT LAMBTON			
KETTLE POINT			
HAMILTON	26.8		
MARCELLUS			
DUNDEE	99.8		
COLUMBUS			
LUCAS	132.2		
AMHERSTBURG			
SYLVANIA			
BOIS BLANC			
SPRINGVALE			
ORISKANY			
SILURIAN: BASS ISLANDS			
G SHALE			
F SHALE			
F SALT			
E CARBONATE			
D SALT/EQUIVALENT			
C SHALE			
B MARKER			
B EQUIVALENT			
B SALT			
B ANHYDRITE			
A2 CARBONATE			
A2 SALT			
SILURIAN: A2 ANHYDRITE			
A1 CARBONATE			
A1 SALT			
A1 ANHYDRITE			
GUELPH			
ERAMOSA			
GOAT ISLAND			
GASPORT/WARTON			
DECEW			
ROCHESTER			
IRONDEQUOIT			
REYNALES/FOSSIL HILL			
THOROLD			
GRIMSBY			
CABOT HEAD			
MANITOULIN			
WHIRLPOOL			
ORDOVICIAN: QUEENSTON			
BLUE MOUNTAIN - GEORG. BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Lambton TWP Enniskillen BLK TRAC 2-6 LOT 11 CON XII

WELL NAME Flusher 1 Disposal Enniskillen 2-6-11-XII PERMIT 7318 INIT CLASS BD

OPERATOR R.A. Edward TARGET DEV CUR STATUS OSGS-BD

DRILLING DATA

CONTRACTOR Lorne Newport
RIG TYPE Cable DEPTHS
CABLE TOOL .5 KB ELEV 205.0
BOT 198.1 LOGGER 198.4
ROTRY TOOL DRILLER 198.1
BOT DEEP END
DRLG FLD PLUG BK 195.7

DATES

PERMIT 1988-05-26
SPUD 1988-09-12
COMPTD 1988-10-17
OFFCNF 1988-11-16
WRKOVR
ABNDND

COORDINATES

NORTH m
SOUTH 722.5 m
EAST m
WEST 462.5 m
LAT 42 54 00
LONG 82 09 32.4

SAMPLES

TOP 27.4
BOT 198.4
TRAY 7650

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
85.3 – 86.6	Show	NA
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
273.1	48.7	28.5	SHO	28.5
219.1	35.7	29.6	SHO	0
177.8	29.8	102.2	SHO	102.2
139.7	20.8	148.8	CEM	0

COMPLETION DATA

GAS $10^3 m^3/d$
OIL m^3/d
SIP kPa
FORM Lucas
INTRVL 148.8-198.1 m
m
m
PERF ☐ OPEN HOLE ☒

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
85.3 – 86.6	Show	NA
121.9 – 125.0	Show	NA
136.6 – 145.7	Show	NA
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
0.0 – 198.4	GRNL	CMPL
98.0 – 198.4	DENL	"
–		
–		
–		
–		

REMARKS

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
85.3 – 86.6	NA	SUL
154.8 – 156.4	62.0	SUL
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	ANAL
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / ~~KANCLEVEX~~	0.0		
DRIFT / ~~KANDOUTANE~~	0.5		
DEVONIAN: PORT LAMBTON			
KETTLE POINT			
HAMILTON	24.0		
MARCELLUS			
DUNDEE	100.2		
COLUMBUS			
LUCAS	132.5		
AMHERSTBURG			
SYLVANIA			
BOIS BLANC			
SPRINGVALE			
ORISKANY			
SILURIAN: BASS ISLANDS			
G SHALE			
F SHALE			
F SALT			
E CARBONATE			
D SALT/EQUIVALENT			
C SHALE			
B MARKER			
B EQUIVALENT			
B SALT			
B ANHYDRITE			
A2 CARBONATE			
A2 SALT			
SILURIAN: A2 ANHYDRITE			
A1 CARBONATE			
A1 SALT			
A1 ANHYDRITE			
GUELPH			
ERAMOSA			
GOAT ISLAND			
GASPORT/WARTON			
DECEW			
ROCHESTER			
IRONDEQUOIT			
REYNALES/FOSSIL HILL			
THOROLD			
GRIMSBY			
CABOT HEAD			
MANITOULIN			
WHIRLPOOL			
ORDOVICIAN: QUEENSTON			
BLUE MOUNTAIN - GEORG. BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY: Lambton TWP: Enniskillen BLK: TRAC: 1-2 LOT: 17 CON: I

WELL NAME: Fairbank 1 Enniskillen 1-2-17-I PERMIT: 7363 INIT CLASS: BD

OPERATOR: Charles Fairbank Oil Properties Ltd TARGET: DEV CUR STATUS: OSGSBD-SUS

DRILLING DATA

CONTRACTOR: Ken Girard

RIG TYPE: Cable DEPTHS

CABLE TOP: .6 KB ELEV: 201.4

BOT: 122.5 LOGGER: 121.5

ROTRY TOP: DRILLER: 122.5

BOT: DEEP END:

DRLG FLD: PLUG BK:

DATES

PERMIT: 1988-09-26

SPUD: 1988-09-12

COMPTD: 1988-09-21

OFFCNF: 1988-10-21

WRKOVR:

ABNDND:

COORDINATES

NORTH: m

SOUTH: 109.5 m

EAST: 177.2 m

WEST: m

LAT: 42 46 14

LONG: 82 07 02.5

SAMPLES

TOP: 9.1

BOT: 121.9

TRAY: 6670

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
81.7 – 82.9	Show	NA
7.6 – 9.1	Show	NA
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
219.1	35.7	11.7	SHO	0
177.8	30.0	91.2	SHO	0

COMPLETION DATA

GAS: 10³m³/d

OIL: m³/d

SIP: kPa

FORM: Dundee, Columbus

INTRVL: 91.2-122.5 m

m

m

LOGGING RECORD

INTERVAL	TYPE	COMPANY
0.0 – 121.5	GRNL	CHPL
88.4 – 121.5	DENL	"
–		
–		
–		
–		

PERF ☐ OPEN HOLE ☑

REMARKS

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
81.7 – 82.9	Show	NA
110.3 – 113.4	Show	NA
–		
–		
–		

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
9.1 – 9.8	Show	FRE
82.3 –	84.1	SUL
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / [illegible]	0.0		
DRIFT / [illegible]	0.6		
PORT LAMBTON			
KETTLE POINT			
HAMILTON	9.1		
MARCELLUS			
DUNDEE	79.3		
COLUMBUS			
LUCAS	106.1		
AMHERSTBURG			
SYLVANIA			
BOIS BLANC			
SPRINGVALE			
ORISKANY			
BASS ISLANDS			
G SHALE			
F SHALE			
F SALT			
E CARBONATE			
D SALT/EQUIVALENT			
C SHALE			
B MARKER			
B EQUIVALENT			
B SALT			
B ANHYDRITE			
A2 CARBONATE			
A2 SALT			
A2 ANHYDRITE			
A1 CARBONATE			
A1 SALT			
A1 ANHYDRITE			
GUELPH			
ERAMOSA			
GOAT ISLAND			
GASPORT/WARTON			
DECEW			
ROCHESTER			
IRONDEQUOIT			
REYNALES/POSSIL HILL			
THOROLD			
GRIMSBY			
CABOT HEAD			
MANITOULIN			
WHIRLPOOL			
QUEENSTON			
BLUE MOUNTAIN - GEORG. BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY: Lambton TWP: Enniskillen BLK: TRAC: 4-2 LOT: 17 CON: I

WELL NAME: Fairbank 3 Enniskillen 4-2-17-I PERMIT: 7365 INIT CLASS: BD

OPERATOR: Charles Fairbank Oil Properties Ltd TARGET: DEV CUR STATUS: OS-BD

DRILLING DATA

CONTRACTOR: Ken Girard

RIG TYPE: Cable DEPTHS

CABLE TOP: 1.1 KB ELEV: 201.7

BOT: 186.0 LOGGER: 186.2

ROTRY TOP DRILLER: 186.0

BOT DEEP END:

DRLG FLD PLUG BK:

DATES

PERMIT: 1988-08-05

SPUD: 1988-08-01

COMPTD: 1988-08-15

OFFCNF: 1988-09-14

WRKOVR:

ABNDND:

COORDINATES

NORTH: m

SOUTH: 328.5 m

EAST: 202.3 m

WEST: m

LAT: 42 46 07

LONG: 82 07 01.5

SAMPLES

TOP: 11.1

BOT: 186.3

TRAY: 6742

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
219.1	35.7	13.0	SHO	0
177.8	29.8	84.0	SHO	84.0
114.3	14.1	133.2	CEM	0
60.3	7.0	137.2	PAC	0

COMPLETION DATA

GAS: 10³m³/d

OIL: m³/d

SIP: kPa

FORM: Lucas

INTRVL: 133.2-186.0 m

m

m

LOGGING RECORD

INTERVAL	TYPE	COMPANY
0.0 – 186.2	GRNL	CHPL
80.0 – 186.2	DENL	"
–		
–		
–		
–		

PERF ☐ OPEN HOLE ☑

REMARKS

Quartz sand in Lucas

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
113.0 – 119.0	Show	NA
–		
–		
–		
–		

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
85.0 –	55.0	SUL
141.0 – 143.0	54.0	SUL
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / [illegible]	0.0		
DRIFT / [illegible]	1.1		
PORT LAMBTON			
KETTLE POINT			
HAMILTON	11.8		
MARCELLUS			
DUNDEE	82.0		
COLUMBUS	108.8		
LUCAS			
AMHERSTBURG			
SYLVANIA			
BOIS BLANC			
SPRINGVALE			
ORISKANY			
BASS ISLANDS			
G SHALE			
F SHALE			
F SALT			
E CARBONATE			
D SALT/EQUIVALENT			
C SHALE			
B MARKER			
B EQUIVALENT			
B SALT			
B ANHYDRITE			
A2 CARBONATE			
A2 SALT			
A2 ANHYDRITE			
A1 CARBONATE			
A1 SALT			
A1 ANHYDRITE			
GUELPH			
ERAMOSA			
GOAT ISLAND			
GASPORT/WARTON			
DECEW			
ROCHESTER			
IRONDEQUOIT			
REYNALES/POSSIL HILL			
THOROLD			
GRIMSBY			
CABOT HEAD			
MANITOULIN			
WHIRLPOOL			
QUEENSTON			
BLUE MOUNTAIN - GEORG. BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

T.R. Carter

CTY Lambton TWP Enniskillen BLK TRAC 2-1 LOT 17 CON I

WELL NAME Fairbank 2 Enniskillen 2-1-17-I PERMIT 7364 INIT CLASS BD

OPERATOR Charles Fairbank Oil Properties Ltd TARGET DEV CUR STATUS OSBD-SUS

DRILLING DATA

CONTRACTOR Ken Girard
RIG TYPE Cable DEPTHS
CABLE TOP .6 KB ELEV 201.5
BOT 121.9 LOGGER 121.6
ROTRY TOP DRILLER 121.9
BOT DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-09-26
SPUD 1988-08-29
COMPTD 1988-09-09
OFFCNF 1988-10-09
WRKOVR
ABNDND

COORDINATES

NORTH m
SOUTH 77.7 m
EAST 348.3 m
WEST m
LAT 42 46 15
LONG 82 06 55

SAMPLES

TOP 8.8
BOT 121.9
TRAY 6670

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
219.1	35.7	11.4	SHO	0
177.8	29.8	94.0	SHO	0

COMPLETION DATA

GAS 10³m³/d
OIL m³/d
SIP kPa
FORM Columbus
INTRVL 94.0-121.9 m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
115.8 – 120.1	Show	NA
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
0.0 – 121.6	GRNL	CMPL
88.4 – 121.6	DENL	"
–		
–		
–		
–		

PERF ☐ OPEN HOLE ☒

REMARKS

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
7.9 – 9.3	5.5	FRE
82.0 – 82.3	98.5	SUL
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	ANAL
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / ~~RIG LEVEL~~	0.0		
DRIFT / ~~LAKE BOTTOM~~	0.6		
DEVONIAN: PORT LAMBTON			
KETTLE POINT			
HAMILTON	10.4		
MARCELLUS			
DUNDEE	79.9		
COLUMBUS			
LUCAS	106.7		
AMHERSTBURG			
SYLVANIA			
BOIS BLANC			
SPRINGVALE			
ORISKANY			
SILURIAN: BASS ISLANDS			
G SHALE			
F SHALE			
F SALT			
E CARBONATE			
D SALT/EQUIVALENT			
C SHALE			
B MARKER			
B EQUIVALENT			
B SALT			
B ANHYDRITE			
A2 CARBONATE			
A2 SALT			

SILURIAN: A2 ANHYDRITE			
A1 CARBONATE			
A1 SALT			
A1 ANHYDRITE			
GUELPH			
ERAMOSA			
GOAT ISLAND			
GASPORT/MARTON			
DECEW			
ROCHESTER			
IRONDEQUOIT			
REYNALES/FOSSIL HILL			
THOROLD			
GRIMSBY			
CABOT HEAD			
MANITOULIN			
WHIRLPOOL			
ORDOVICIAN: QUEENSTON			
BLUE MOUNTAIN - GEORG. BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Lambton TWP Enniskillen BLK TRAC 4-5 LOT 17 CON X

WELL NAME Jacques #6 Enniskillen 4-5-17-X PERMIT 7249 INIT CLASS DEV

OPERATOR Lambton Area Industries Ltd TARGET DEV CUR STATUS OP

DRILLING DATA

CONTRACTOR Lorne Newport
RIG TYPE Cable DEPTHS
CABLE TOP 1.2 KB ELEV 204.5
BOT 143.0 LOGGER
ROTRY TOP DRILLER 143.0
BOT DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-03-15
SPUD 1988-04-13
COMPTD 1988-05-24
OFFCNF 1988-06-23
WRKOVR
ABNDND

COORDINATES

NORTH m
SOUTH 900.7 m
EAST m
WEST 90.8 m
LAT 42 52 22
LONG 82 06 38

SAMPLES

TOP 20.4
BOT 143.0
TRAY 7935

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
219.1	NA	20.4	SHO	0
139.7	NA	136.0	CEM	0

COMPLETION DATA

GAS 10³m³/d
OIL Show m³/d
SIP kPa
FORM Lucas
INTRVL 136.0-143.0 m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
137.8 – 143.0	Show	NA
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
–		
–		
–		
–		
–		
–		

PERF ☐ OPEN HOLE ☒

REMARKS

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
30.5 – 32.0	6.1	FRE
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	ANAL
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / ~~LAKE LEVEL~~	0.0		
DRIFT / ~~LAKE BOTTOM~~	1.2		
DEVONIAN: PORT LAMBTON			
KETTLE POINT	20.4		
HAMILTON	21.9		
MARCELLUS			
DUNDEE	104.0		
COLUMBUS			
LUCAS	131.1		
AMHERSTBURG			
SYLVANIA			
BOIS BLANC			
SPRINGVALE			
ORISKANY			
SILURIAN: BASS ISLANDS			
G SHALE			
F SHALE			
F SALT			
E CARBONATE			
D SALT/EQUIVALENT			
C SHALE			
B MARKER			
B EQUIVALENT			
B SALT			
B ANHYDRITE			
A2 CARBONATE			
A2 SALT			

SILURIAN: A2 ANHYDRITE			
A1 CARBONATE			
A1 SALT			
A1 ANHYDRITE			
GUELPH			
ERAMOSA			
GOAT ISLAND			
GASPORT/MARTON			
DECEW			
ROCHESTER			
IRONDEQUOIT			
REYNALES/FOSSIL HILL			
THOROLD			
GRIMSBY			
CABOT HEAD			
MANITOULIN			
WHIRLPOOL			
ORDOVICIAN: QUEENSTON			
BLUE MOUNTAIN - GEORG. BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Lambton TWP Enniskillen BLK TRAC LOT 19 CON XIII

WELL NAME Cadington Res et al 1 Ennis. 2-19-XIII PERMIT 7304 INIT CLASS NPW

OPERATOR PPC Oil and Gas Corp. TARGET SAL CUR STATUS DH-ABD

DRILLING DATA

CONTRACTOR Eagle Drilling Services

RIG TYPE Rotary DEPTHS

CABLE TOP KB ELEV 209.4

BOT LOGGER 725.8

ROTRY TOP 2.5 DRILLER 726.8

BOT 726.8 DEEP END

DRLG FLD PLUG BK

DATES

PERMIT 1988-05-13

SPUD 1988-09-16

COMPTD 1988-09-24

OFFCNF 1989-09-24

WRKOVR

ABNDND 1988-09-27

COORDINATES

NORTH m

SOUTH 228.0 m

EAST 186.0 m

WEST m

LAT 42 54 57.5

LONG 82 05 53

SAMPLES

TOP 31.0

BOT 726.4

TRAY 9412

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244	47.6	31.4	CEM	0
178	34.0	379.3	CEM	250.0

COMPLETION DATA

GAS 10 $^3m^3/d$

OIL m^3/d

SIP kPa

FORM

INTRVL m

m

m

PERF ☐ OPEN HOLE ☐

REMARKS

A-2 Shale at 615.0

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
0.0 – 725.2	GRNL	Atlas Wire
–		
–		
–		
–		
–		

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS

		TOP	ELEV	THICK
	KB / LAKE HURON	0.0		
	DRIFT / LAKE ERIE CLAY	2.5		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT	22.5		
	HAMILTON	48.6		
	MARCELLUS			
	DUNDEE	135.0		
	COLUMBUS			
	LUCAS	167.0		
	AMHERSTBURG	234.0		
	SYLVANIA			
	BOIS BLANC	282.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	315.0		
	G SHALE	358.2		
	F SHALE	364.5		
	F SALT	401.0		
	E CARBONATE	433.3		
	D SALT/EQUIVALENT	461.4		
	C SHALE	482.6		
	B MARKER	500.5		
	B EQUIVALENT			
	B SALT	507.8		
	B ANHYDRITE			
	A2 CARBONATE	586.1		
	A2 SALT	622.6		
SILURIAN	A2 ANHYDRITE	649.5		
	A1 CARBONATE	651.0		
	A1 SALT			
	A1 ANHYDRITE	691.6		
	GUELPH	695.1		
	ERAMOSA			
	GOAT ISLAND	701.2		
	GASPORT/WARTON	710.0		
	DECEW			
	ROCHESTER	721.0		
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL			
	THOROLD			
	GRIMSBY			
	CABOT HEAD			
	MANITOULIN			
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON			
	BLUE MOUNTAIN - GEORG BAY			
	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
	CAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Lambton TWP Enniskillen BLK TRAC 2 LOT 21 CON II

WELL NAME Perma Enniskillen 2-21-II PERMIT 7228 INIT CLASS NPW

OPERATOR Perma Energy Ltd TARGET SAL CUR STATUS GP

DRILLING DATA

CONTRACTOR Rawlings Drilling Co. Ltd

RIG TYPE Cable DEPTHS

CABLE TOP 1.2 KB ELEV 203.5

BOT 603.2 LOGGER 603.2

ROTRY TOP DRILLER 603.2

BOT DEEP END

DRLG FLD PLUG BK 566.6

DATES

PERMIT 1988-01-22

SPUD 1988-02-02

COMPTD 1988-03-16

OFFCNF 1989-03-16

WRKOVR

ABNDND

COORDINATES

NORTH m

SOUTH 304.8 m

EAST 176.8 m

WEST m

LAT 42 46 48

LONG 82 05 17

SAMPLES

TOP 18.3

BOT 602.6

TRAY 4399

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
555.3 – 560.8	4.701	6033
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
273	18.4	19.8	SHO	0
219	10.9	137.2	SHO	0
178	10.4	370.0	CEM	0
140	6.8	579.0	CEM	0

COMPLETION DATA

GAS 3.908 10 $^3m^3/d$

OIL m^3/d

SIP 6033 kPa

FORM A-1 Carbonate

INTRVL 557.2-559.0 m

560.2-560.8 m

561.7-562.7 m

PERF ☒ OPEN HOLE ☐

REMARKS

A-2 Shale at 535.2

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
0.0 – 603.2	GRNL	CHPL
498.3 – 602.4	DENL	"
457.7 – 566.6	CORR	"
–		
–		
–		
–		

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
19.5 –		FRE
29.0 –	15.2	FRE
147.8 –	45.7	SUL
598.9 – 600.5	553.2	SAL
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS

		TOP	ELEV	THICK
	KB / LAKE HURON	0.0		
	DRIFT / LAKE ERIE CLAY	1.2		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT	19.2		
	HAMILTON	50.0		
	MARCELLUS			
	DUNDEE	130.5		
	COLUMBUS			
	LUCAS	154.5		
	AMHERSTBURG	241.8		
	SYLVANIA			
	BOIS BLANC	284.1		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	298.0		
	G SHALE	353.9		
	F SHALE	357.2		
	F SALT			
	E CARBONATE	403.3		
	D SALT/EQUIVALENT			
	C SHALE	431.6		
	B MARKER	449.0		
	B EQUIVALENT			
	B SALT	454.8		
	B ANHYDRITE			
	A2 CARBONATE	504.1		
	A2 SALT	544.4		
SILURIAN	A2 ANHYDRITE	555.3		
	A1 CARBONATE	557.2		
	A1 SALT			
	A1 ANHYDRITE	585.2		
	GUELPH	587.0		
	ERAMOSA			
	GOAT ISLAND	597.4		
	GASPORT/WARTON			
	DECEW			
	ROCHESTER			
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL			
	THOROLD			
	GRIMSBY			
	CABOT HEAD			
	MANITOULIN			
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON			
	BLUE MOUNTAIN - GEORG BAY			
	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
	CAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Lambton TWP Enniskillen BLK TRAC 8 LOT 24 CON VI
WELL NAME Perma Enniskillen 8-24-VI PERMIT 7227 INIT CLASS NPW
OPERATOR Perma Energy Ltd TARGET SAL CUR STATUS DH-ABD

DRILLING DATA
CONTRACTOR Rawlings Drilling
RIG TYPE Cable DEPTHS
CABLE TOP 1.3 KB ELEV 205.4
BOT 624.8 LOGGER
ROTRY TOP DRILLER 624.8
BOT DEEP END
DRLG FLD PLUG BK

DATES
PERMIT 1988-01-22
SPUD 1988-02-24
COMPTD 1988-03-30
OFFCNF 1989-03-20
WRKOVR
ABNOND 1988-04-07

COORDINATES
NORTH 160.0 m
SOUTH m
EAST m
WEST 107.0 m
LAT 42 49 14
LONG 82 03 35

SAMPLES
TOP 15.2
BOT 624.8
TRAY 9413

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
273	60.2	17.7	SHO	17.7
219	35.7	118.6	SHO	118.6
178	34.1	340.2	CEM	243.1

COMPLETION DATA
GAS $10^3 m^3/d$
OIL m^3/d
SIP kPa
FORM
INTRVL m
m
m
PERF ☐ OPEN HOLE ☐
REMARKS

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
–		
–		
–		
–		
–		
–		

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
15.2 –	NA	FRE
160.0 –	61.0	SUL
623.9 –	593.4	SAL
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	MM
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / [illegible]	0.0		
DRIFT / [illegible]	1.3		
DEVONIAN: PORT LAMBTON			
KETTLE POINT	15.2		
HAMILTON	40.5		
MARCELLUS			
DUNDEE	115.8		
COLUMBUS			
LUCAS	141.0		
AMHERSTBURG	202.3		
SYLVANIA			
BOIS BLANC	269.3		
SPRINGVALE			
ORISKANY			
SILURIAN: BASS ISLANDS	281.0		
G SHALE	327.7		
F SHALE	334.5		
F SALT			
E CARBONATE	377.0		
D SALT/[illegible]	398.5		
C SHALE	410.5		
B MARKER	422.2		
B EQUIVALENT			
B SALT	432.8		
B ANHYDRITE			
A2 CARBONATE	515.5		
A2 SALT	557.8		

A2 ANHYDRITE	570.0		
A1 CARBONATE	570.8		
A1 SALT			
A1 ANHYDRITE	612.9		
GUELPH	616.3		
ERAMOSA			
GOAT ISLAND	623.5		
GASPORT/WARTON			
DECEW			
ROCHESTER			
IRONDEQUOIT			
REYNALES/FOSSIL HILL			
THOROLD			
GRIMSBY			
CABOT HEAD			
MANITOULIN			
WHIRLPOOL			
QUEENSTON			
BLUE MOUNTAIN - GEORG BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Lambton TWP Enniskillen BLK TRAC LOT 28 CON I
WELL NAME Union 48 Enniskillen 28-I PERMIT 7250 INIT CLASS NGS
OPERATOR Union Gas Ltd TARGET SAL CUR STATUS NGS

DRILLING DATA
CONTRACTOR James Newport Drilling Ltd
RIG TYPE Cable DEPTHS
CABLE TOP 1.2 KB ELEV 205.1
BOT 521.0 LOGGER 469.7
ROTRY TOP DRILLER 521.0
BOT DEEP END
DRLG FLD PLUG BK

DATES
PERMIT 1988-03-15
SPUD 1988-05-05
COMPTD 1988-06-21
OFFCNF 1988-07-21
WRKOVR
ABNOND

COORDINATES
NORTH 451.5 m
SOUTH m
EAST m
WEST 200.0 m
LAT 42 45 42.5
LONG 82 01 56

SAMPLES
TOP 15.0
BOT 521.0
TRAY 9497

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
456.0 –	SHOW	NA
473.0 –	NA	NA
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
340	71.4	16.2	SHO	0
273	60.3	117.6	SHO	116.7
219	35.7	343.5	CEM	0
178	29.8	469.2	CEM	0

COMPLETION DATA
GAS $10^3 m^3/d$
OIL m^3/d
SIP kPa
FORM Guelph
INTRVL 473.0-521.0 m
m
m
PERF ☐ OPEN HOLE ☑
REMARKS
A-2 Shale at 472.9

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
270.0 – 468.9	GRNL	Atlas Wire
0.0 – 465.0	VERL	"
343.7 – 469.2	DENL	"
0.0 – 464.9	CBND	CMPL
0.0 – 464.9	CCL	"
–		
–		

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
15.0 –	NA	FRE
153.0 –	100.0	SUL
175.0 –	87.0	SUL
239.0 –	60.0	SUL
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	MM
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / [illegible]	0.0		
DRIFT / [illegible]	1.2		
DEVONIAN: PORT LAMBTON			
KETTLE POINT	16.0		
HAMILTON	40.0		
MARCELLUS			
DUNDEE	116.6		
COLUMBUS			
LUCAS	152.0		
AMHERSTBURG	218.0		
SYLVANIA			
BOIS BLANC	266.0		
SPRINGVALE			
ORISKANY			
SILURIAN: BASS ISLANDS	301.5		
G SHALE	342.1		
F SHALE	348.8		
F SALT			
E CARBONATE	390.0		
D SALT/EQUIVALENT			
C SHALE	413.0		
B MARKER	437.3		
B EQUIVALENT	443.8		
B SALT			
B ANHYDRITE	452.5		
A2 CARBONATE	454.5		
A2 SALT			

A2 ANHYDRITE			
A1 CARBONATE			
A1 SALT			
A1 ANHYDRITE			
GUELPH	474.0		
ERAMOSA			
GOAT ISLAND			
GASPORT/WARTON			
DECEW			
ROCHESTER			
IRONDEQUOIT			
REYNALES/FOSSIL HILL			
THOROLD			
GRIMSBY			
CABOT HEAD			
MANITOULIN			
WHIRLPOOL			
QUEENSTON			
BLUE MOUNTAIN - GEORG BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY	Lambton	TWP	Enniskillen	BLK	TRAC	LOT	28	CON	I
WELL NAME	Union 49 Enniskillen 28-1				PERMIT	7251	INIT CLASS		NGS
OPERATOR	Union Gas Ltd				TARGET	SAL	CUR STATUS		NGS

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	C. Shaw Drilling Ltd			PERMIT	1988-03-15	NORTH	151.4	m	TOP	13.0
RIG TYPE	Cable	DEPTHS		SPUD	1988-04-25	SOUTH		m	BOT	520.0
CABLE TOP	1.2	KB ELEV	205.1	COMPTD	1988-06-08	EAST		m	TRAY	9270
BOT	520.0	LOGGER	520.3	OFFCNF	1988-07-08	WEST	190.0	m		
ROTRY TOP		DRILLER	520.0	WRKOVR		LAT	42 45 33			
BOT		DEEP END		ABNDND		LONG	82 01 56			
DRLG FLD		PLUG BK								

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS	$10^3m^3/d$
475.0 –	NA	5350	340	71.4	13.7	SHO	0	OIL	m^3/d
–			273	60.3	121.0	SHO	121.0	SIP	kPa
–			219	35.7	349.6	CEM	0	FORM	Guelph
–			178	29.8	465.7	CEM	0	INTRVL	472.0-521.0 m
–									m
–									m

INITIAL OIL RECORD			LOGGING RECORD			PERF ☐	OPEN HOLE ☒
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	REMARKS	
–			0.0 – 519.7	GRNL	Atlas Wire.		
–			0.0 – 459.2	VERL	"		
–			465.0 – 519.8	DENL	"	A-2 Shale at 470.9	
–			0.0 – 460.6	CBND	"	Pinnacle reef	
–			–				
–			–				

INITIAL WATER RECORD			CORING RECORD			
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	mm
13.0 –	NA	FRE	–			
125.0 –	50.0	SUL	–			
–			–			
–			–			
–			–			
–			–			

GEOLOGICAL CONTACTS		TOP	ELEV	THICK					
	KB /LAKE LEVEL	0.0				A2 ANHYDRITE			
	DRIFT /LAKE BEDROCK	1.2				A1 CARBONATE			
DEVONIAN	PORT LAMBTON					A1 SALT			
	KETTLE POINT	14.0				A1 ANHYDRITE			
	HAMILTON	40.0				GUELPH	472.0		
	MARCELLUS					ERAMOSA			
	DUNDEE	116.3				GOAT ISLAND			
	COLUMBUS					GASPORT/MARTON			
	LUCAS	152.0				DECEW			
	AMHERSTBURG	222.0				ROCHESTER			
	SYLVANIA				SILURIAN	IRONDEQUOIT			
	BOIS BLANC	268.0				REYNALES/FOSSIL HILL			
	SPRINGVALE					THOROLD			
	ORISKANY					GRIMSBY			
	BASS ISLANDS	307.0				CABOT HEAD			
	G SHALE	347.9				MANITOULIN			
	F SHALE	356.3				WHIRLPOOL			
	F SALT					QUEENSTON			
	E CARBONATE	395.0				BLUE MOUNTAIN - GEORG. BAY			
	D SALT/EQUIVALENT					COLLINGWOOD			
SILURIAN	C SHALE	417.8			ORDOVICIAN	COBOURG			
	B MARKER	437.2				VERULAM			
	B EQUIVALENT	463.0				KIRKFIELD			
	B SALT					COBOCONK			
	B ANHYDRITE	451.2				GULL RIVER			
	A2 CARBONATE	453.5				SHADOW LAKE			
	A2 SALT					CAMBRIAN			
						PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY	Lambton	TWP	Enniskillen	BLK	TRAC	LOT	28	CON	I
WELL NAME	Union 50 Enniskillen 28-1				PERMIT	7252	INIT CLASS		NGS
OPERATOR	Union Gas Ltd				TARGET	SAL	CUR STATUS		NGS

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	James Newport Drilling			PERMIT	1988-03-15	NORTH	301.4	m	TOP	15.0
RIG TYPE	Cable	DEPTHS		SPUD	1988-04-15	SOUTH		m	BOT	521.0
CABLE TOP	1.2	KB ELEV	204.9	COMPTD	1988-06-06	EAST		m	TRAY	9235
BOT	521.0	LOGGER	520.4	OFFCNF	1988-07-06	WEST	200.0	m		
ROTRY TOP		DRILLER	521.0	WRKOVR		LAT	42 45 38			
BOT		DEEP END		ABNDND		LONG	82 01 56			
DRLG FLD		PLUG BK								

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS	$10^3m^3/d$
454.0 –	SHOW	NA	340	71.4	15.5	SHO	0	OIL	NA m^3/d
472.0 –	NA	NA	273	60.3	118.7	SHO	118.7	SIP	NA kPa
–			219	35.7	346.2	CEM	0	FORM	Guelph
–			178	29.8	463.6	CEM	0	INTRVL	472.0-521.0 m
–									m
–									m

INITIAL OIL RECORD			LOGGING RECORD			PERF ☐	OPEN HOLE ☒
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	REMARKS	
14.0 –	NA	FRE	4.0 – 456.0	CBVD	SCH		
147.0 – 150.0	65.0	SUL	0.0 – 519.8	GRNL	Atlas Wire.		
–			0.0 – 459.2	VERL	"	A-2 Shale at 470.8	
–			464.2 – 519.7	DENL	"		
–			–				
–			–				

INITIAL WATER RECORD			CORING RECORD			
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	mm
–			–			
–			–			
–			–			
–			–			
–			–			

GEOLOGICAL CONTACTS		TOP	ELEV	THICK					
	KB /LAKE LEVEL	0.0				A2 ANHYDRITE			
	DRIFT /LAKE BEDROCK	1.2				A1 CARBONATE			
DEVONIAN	PORT LAMBTON					A1 SALT			
	KETTLE POINT	16.0				A1 ANHYDRITE			
	HAMILTON	40.6				GUELPH	471.9		
	MARCELLUS					ERAMOSA			
	DUNDEE	117.3				GOAT ISLAND			
	COLUMBUS					GASPORT/MARTON			
	LUCAS	152.0				DECEW			
	AMHERSTBURG	221.0				ROCHESTER			
	SYLVANIA				SILURIAN	IRONDEQUOIT			
	BOIS BLANC	274.0				REYNALES/FOSSIL HILL			
	SPRINGVALE					THOROLD			
	ORISKANY					GRIMSBY			
	BASS ISLANDS	307.5				CABOT HEAD			
	G SHALE	345.9				MANITOULIN			
	F SHALE	352.0				WHIRLPOOL			
	F SALT					QUEENSTON			
	E CARBONATE	392.9				BLUE MOUNTAIN - GEORG. BAY			
	D SALT/EQUIVALENT					COLLINGWOOD			
SILURIAN	C SHALE	415.3			ORDOVICIAN	COBOURG			
	B MARKER	437.6				VERULAM			
	B EQUIVALENT	462.4				KIRKFIELD			
	B SALT					COBOCONK			
	B ANHYDRITE	451.5				GULL RIVER			
	A2 CARBONATE	453.1				SHADOW LAKE			
	A2 SALT					CAMBRIAN			
						PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

T.R. Carter

CTY	Lambton	TWP	Enniskillen	BLK	TRAC		LOT	28	CON	I	
WELL NAME	Union 51 Enniskillen 28-1				PERMIT	7310	INIT CLASS		NGS		
OPERATOR	Union Gas Ltd				TARGET	SAL	CUR STATUS		NGS		

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	James Newport Drilling			PERMIT	1988-05-19	NORTH	606.4	m	TOP	16.0
RIG TYPE	Cable	DEPTHS		SPUD	1988-06-10	SOUTH		m	BOT	519.0
CABLE TOP	1.2	KB ELEV	205.1	COMPTD	1988-07-25	EAST		m	TRAY	9229
BOT	519.0	LOGGER	517.5	OFFCNF	1988-08-24	WEST	190.0	m		
ROTRY TOP		DRILLER	519.0	WRKOVR		LAT	42 45 48			
BOT		DEEP END		ABNDND		LONG	82 01 56			
DRLG FLD		PLUG BK								

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS	10 ^{3}m^3/d
459.0 – 461.0	Show	NA	340	71.4	16.6	SHO	0	OIL	m^3/d
483.0 –	NA	5500	273	60.3	118.8	SHO	118.8	SIP 5500	kPa
–			219	35.7	353.5	CEM	0	FORM Guelph	
–			178	29.8	470.0	CEM	0	INTRVL 483.0-519.0	m
–									m
–									m

INITIAL OIL RECORD			LOGGING RECORD			PERF ☐ OPEN HOLE ☑
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	REMARKS
–			0.0 – 516.9	GRNL	AtlasWire.	
–			0.0 – 465.0	VERL	"	
–			460.0 – 517.0	DENL	"	A-2 Shale at 481.3
–			0.0 – 455.0	CBND	CMPL	
–			–			
–			–			

INITIAL WATER RECORD			CORING RECORD			
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	mm
15.0 –	NA	FRE	–			
151.0 – 154.0	65.0	SUL	–			
–			–			
–			–			
–			–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / ~~KAMMOOKEE~~	0.0		
	DRIFT / ~~LAKEWOODVERK~~	1.2		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT	16.0		
	HAMILTON	41.3		
	MARCELLUS			
	DUNDEE	118.0		
	COLUMBUS			
	LUCAS	156.5		
	AMHERSTBURG	219.0		
	SYLVANIA			
	BOIS BLANC	266.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	304.0		
	G SHALE	350.2		
	F SHALE	357.0		
	F SALT			
	E CARBONATE	400.0		
	D SALT/EQUIVALENT			
	C SHALE	422.7		
	B MARKER	446.4		
	B EQUIVALENT	449.8		
	B SALT			
	B ANHYDRITE	461.0		
	A2 CARBONATE	463.3		
	A2 SALT			

SILURIAN	A2 ANHYDRITE			
	A1 CARBONATE			
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH	482.8		
	ERAMOSA			
	GOAT ISLAND			
	GASPORT/MARTON			
	DECEW			
	ROCHESTER			
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL			
	THOROLD			
	GRIMSBY			
	CABOT HEAD			
	MANITOULIN			
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON			
	BLUE MOUNTAIN - GEORG BAY			
	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
	CAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY	Lambton	TWP	Enniskillen	BLK	TRAC		LOT	28	CON	I	
WELL NAME	Union 52 Enniskillen 28-1				PERMIT	7311	INIT CLASS		NGS		
OPERATOR	Union Gas Ltd				TARGET	SAL	CUR STATUS		NGS		

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	James Newport Drilling Ltd			PERMIT	1988-05-19	NORTH	90.3	m	TOP	14.0
RIG TYPE	Cable	DEPTHS		SPUD	1988-06-28	SOUTH		m	BOT	400.0
CABLE TOP	1.2	KB ELEV	205.0	COMPTD	1988-08-12	EAST		m	TRAY	9211
BOT	518.0	LOGGER	517.5	OFFCNF	1988-09-11	WEST	45.0	m		
ROTRY TOP		DRILLER	518.0	WRKOVR		LAT	42 45 30			
BOT		DEEP END		ABNDND		LONG	82 01 50			
DRLG FLD		PLUG BK								

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS NA	10 ^{3}m^3/d
464.0 –	Show	NA	340	71.4	13.2	SHO	0	OIL	m^3/d
485.0 – 518.0	NA	NA	273	60.3	118.1	SHO	118.1	SIP NA	kPa
–			219	35.7	352.2	CEM	0	FORM Guelph	
–			178	29.8	476.7	CEM	0	INTRVL 485.0-518.0	m
–									m
–									m

INITIAL OIL RECORD			LOGGING RECORD			PERF ☐ OPEN HOLE ☑
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	REMARKS
–			0.0 – 464.4	CBND	CMPL	
–			0.0 – 474.0	VERL	ATLAS WIRE.	
–			0.0 – 516.9	GRNL	"	A-2 Shale at 482.3
–			460.0 – 517.0	DENL	"	
–			–			
–			–			

INITIAL WATER RECORD			CORING RECORD			
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	mm
13.0 –	NA	FRE	–			
152.0 –	60.0	SUL	–			
–			–			
–			–			
–			–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB /~~XAKELEWUX~~	0.0		
	DRIFT /~~LAKE BEDFORK~~	1.2		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT	16.0		
	HAMILTON	41.0		
	MARCELLUS			
	DUNDEE	117.9		
	COLUMBUS			
	LUCAS	154.0		
	AMHERSTBURG	219.0		
	SYLVANIA			
	BOIS BLANC	257.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	311.0		
	G SHALE	354.0		
	F SHALE	361.3		
	F SALT			
	E CARBONATE	402.6		
	~~XXSALT~~/EQUIVALENT	422.2		
	C SHALE	427.0		
	B MARKER	446.0		
	B EQUIVALENT			
	B SALT			
	B ANHYDRITE	460.0		
	A2 CARBONATE	463.5		
	A2 SALT			

SILURIAN	A2 ANHYDRITE			
	A1 CARBONATE			
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH	483.5		
	ERAMOSA			
	GOAT ISLAND			
	GASPORT/MARTON			
	DECEW			
	ROCHESTER			
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL			
	THOROLD			
	GRIMSBY			
	CABOT HEAD			
	MANITOULIN			
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON			
	BLUE MOUNTAIN - GEORG BAY			
	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
	CAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Lambton TWP Enniskillen BLK TRAC LOT 28 CON I

WELL NAME Union 53 Enniskillen 28-I PERMIT 7312 INIT CLASS NGS

OPERATOR Union Gas Ltd TARGET SAL CUR STATUS NGS

DRILLING DATA

CONTRACTOR C. Shaw Drilling Ltd

RIG TYPE Cable DEPTHS

CABLE TOP 1.3 KB ELEV 205.2

BOT 518.0 LOGGER 518.0

ROTRY TOP DRILLER 518.0

BOT DEEP END

DRLG FLD PLUG BK

DATES

PERMIT 1988-05-19

SPUD 1988-06-14

COMPTD 1988-07-25

OFFCNF 1988-08-24

WRKOVR

ABANDND

COORDINATES

NORTH 240.3 m

SOUTH m

EAST m

WEST 45.0 m

LAT 42 45 35.5

LONG 82 01 50.0

SAMPLES

TOP 16.0

BOT 518.0

TRAY 7915

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
466.0 –	Show	NA
484.0 – 518.0	NA	5300
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
340	71.4	16.5	SHO	0
273	60.3	121.9	SHO	121.9
219	35.7	356.6	CEM	0
178	29.8	475.6	CEM	0

COMPLETION DATA

GAS NA $10^3m^3/d$

OIL m^3/d

SIP 5300 kPa

FORM Guelph

INTRVL 484.0-518.0 m

m

m

PERF ☐ OPEN HOLE ☒

REMARKS

A-2 Shale at 478.4

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
15.0 – 517.3	GRNL	SCH
15.0 – 517.3	CNL	"
15.0 – 517.3	LDT	"
0.0 – 342.8	CBND	CMPL
0.0 – 435.0	CCL	"
0.0 – 435.0	CBVD	"
0.0 – 474.0	VERL	Atlas Wire

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
17.0 –	NA	FRE
159.0 –	60.0	SUL
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / ~~ELEVATION~~	0.0		
	DRIFT / ~~BEDROCK SURFACE~~	1.2		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT	16.5		
	HAMILTON	41.9		
	MARCELLUS			
	DUNDEE	118.4		
	COLUMBUS	148.0		
	LUCAS	153.0		
	AMHERSTBURG	223.0		
	SYLVANIA			
	BOIS BLANC	270.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	305.0		
	G SHALE	344.0		
	F SHALE	350.0		
	F SALT			
	E CARBONATE	391.2		
	D SALT/EQUIVALENT			
	C SHALE	416.0		
	B MARKER	441.3		
	B EQUIVALENT	443.0		
	B SALT			
	B ANHYDRITE	456.8		
	A2 CARBONATE	459.0		
	A2 SALT			

SILURIAN	A2 ANHYDRITE			
	A1 CARBONATE			
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH	480.0		
	ERAMOSA			
	GOAT ISLAND			
	GASPORT/WIARTON			
ORDOVICIAN	DECEW			
	ROCHESTER			
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL			
	THOROLD			
	GRIMSBY			
	CABOT HEAD			
	MANITOULIN			
	WHIRLPOOL			
	QUEENSTON			
	BLUE MOUNTAIN - GEORG BAY			
	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
CAMBRIAN				
PRECAMBRIAN				

GEOLOGY BY: T.R. Carter

CTY Lambton TWP Moore BLK TRAC 2 LOT 13 CON II

WELL NAME Hadley-Midway Moore 2-13-II PERMIT 7324 INIT CLASS NPW

OPERATOR Midway Petroleum Co. TARGET SAL CUR STATUS DH-ABD

DRILLING DATA

CONTRACTOR Rawlings Drilling Co.

RIG TYPE Cable DEPTHS

CABLE TOP 1.3 KB ELEV 189.6

BOT 712.9 LOGGER 712.9

ROTRY TOP DRILLER 712.9

BOT DEEP END

DRLG FLD PLUG BK

DATES

PERMIT 1988-06-10

SPUD 1988-07-05

COMPTD 1988-08-17

OFFCNF 1989-08-17

WRKOVR

ABANDND 1988-08-24

COORDINATES

NORTH m

SOUTH 280.5 m

EAST 159.4 m

WEST m

LAT 42 47 08

LONG 82 20 03.5

SAMPLES

TOP 42.7

BOT 710.8

TRAY 9428

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
273.1	60.3	42.1	SHO	42.1
219.1	35.7	178.9	SHO	169.3
177.8	29.8	395.6	CEM	299.1

COMPLETION DATA

GAS $10^3m^3/d$

OIL m^3/d

SIP kPa

FORM

INTRVL m

m

m

PERF ☐ OPEN HOLE ☐

REMARKS

A-2 Shale at 611.1

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
0.0 – 712.9	GRNL	CMPL
0.0 – 712.9	DENL	"
–		
–		
–		
–		

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
205.7 – 208.8	45.7	SUL
355.7 –	54.9	SUL
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / ~~ELEVATION~~	0.0		
	DRIFT / ~~BEDROCK SURFACE~~	1.3		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT	39.6		
	HAMILTON	101.2		
	MARCELLUS			
	DUNDEE	174.0		
	COLUMBUS			
	LUCAS	205.7		
	AMHERSTBURG	277.0		
	SYLVANIA			
	BOIS BLANC	331.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	351.0		
	G SHALE	389.8		
	F SHALE	395.6		
	F SALT			
	E CARBONATE	440.1		
	D SALT/EQUIVALENT	468.2		
	C SHALE	476.1		
	B MARKER	488.6		
	B EQUIVALENT			
	B SALT	496.8		
	B ANHYDRITE			
	A2 CARBONATE	577.9		
	A2 SALT	619.0		

SILURIAN	A2 ANHYDRITE	645.6		
	A1 CARBONATE	647.7		
	A1 SALT			
	A1 ANHYDRITE	685.2		
	GUELPH	690.1		
	ERAMOSA			
	GOAT ISLAND	696.5		
	GASPORT/WIARTON	703.8		
ORDOVICIAN	DECEW			
	ROCHESTER			
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL			
	THOROLD			
	GRIMSBY			
	CABOT HEAD			
	MANITOULIN			
	WHIRLPOOL			
	QUEENSTON			
	BLUE MOUNTAIN - GEORG BAY			
	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
CAMBRIAN				
PRECAMBRIAN				

GEOLOGY BY: T.R.Carter

T.R. Carter

CTY Lambton TWP Moore BLK TRAC 2 LOT 14 CON VII
WELL NAME Capricorn Moore 2-14-VII PERMIT 7209 INIT CLASS NPW
OPERATOR Capricorn Resources TARGET SAL CUR STATUS OPGS-SUS

DRILLING DATA

CONTRACTOR Rawlings Drilling
RIG TYPE Cable DEPTHS
CABLE TOP 1.2 KB ELEV 194.4
BOT 719.3 LOGGER
ROTRY TOP DRILLER 719.3
BOT DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1987-12-18
SPUD 1988-01-08
COMPTD 1988-02-23
OFFCNF 1989-02-23
WRKOVR
ABNDND

COORDINATES

NORTH m
SOUTH 225.6 m
EAST 167.6 m
WEST m
LAT 42 50 50
LONG 82 20 24

SAMPLES

TOP 40.2
BOT 719.3
TRAY 9278

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
711.4 – 713.5	0.1	3620
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
273	60.2	40.2	SHO	0
219	35.7	132.0	SHO	0
178	34.2	396.3	CEM	0
114	14.0	712.0	CEM	0

COMPLETION DATA

GAS .057-.085 $10^3 m^3/d$
OIL 0.6 m^3/d
SIP 3620 kPa
FORM Guelph
INTRVL 713.5-719.3 m
m
m
PERF ☐ OPEN HOLE ☒

REMARKS

A-2 Shale at 641.0

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
713.5 – 716.8	0.3	NA
713.5 – 719.3	0.6	NA
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
–		
–		
–		
–		
–		

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
39.6 –	NA	FRE
179.8 –	30.5	SUL
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	ANAL
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB ~~MARKER BOBBY~~	0.0		
DRIFT ~~ROCK BOTTOM~~	1.2		
PORT LAMBTON			
KETTLE POINT	40.2		
HAMILTON	67.0		
MARCELLUS			
DUNDEE	141.3		
COLUMBUS			
LUCAS	174.0		
AMHERSTBURG	239.0		
SYLVANIA			
BOIS BLANC	297.5		
SPRINGVALE			
ORISKANY			
BASS ISLANDS	316.0		
G SHALE	364.8		
F SHALE	372.5		
F SALT	409.0		
E CARBONATE	454.5		
D SALT ~~EQUIVALENT~~	475.5		
C SHALE	491.2		
B MARKER	506.0		
B EQUIVALENT			
B SALT	517.0		
B ANHYDRITE			
A2 CARBONATE	597.4		
A2 SALT	644.4		
A2 ANHYDRITE	670.6		
A1 CARBONATE	671.3		
A1 SALT			
A1 ANHYDRITE	708.3		
GUELPH	711.3		
ERAMOSA			
GOAT ISLAND			
GASPORT/WIARTON			
DECEW			
ROCHESTER			
IRONDEQUOIT			
REYNALES/FOSSIL HILL			
THOROLD			
GRIMSBY			
CABOT HEAD			
MANITOULIN			
WHIRLPOOL			
QUEENSTON			
BLUE MOUNTAIN - GEORG BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Lambton TWP Moore BLK TRAC 7 LOT 16 CON V
WELL NAME Tec Kim Col 55 Moore 7-16-V PERMIT 7381 INIT CLASS OBS
OPERATOR Tecumseh Gas Storage TARGET SAL CUR STATUS OBS

DRILLING DATA

CONTRACTOR Underwater Gas Developers
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 195.6
BOT LOGGER 682.9
ROTRY TOP 4.8 DRILLER 682.8
BOT 682.8 DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-08-22
SPUD 1988-09-23
COMPTD 1988-10-03
OFFCNF 1988-11-02
WRKOVR
ABNDND

COORDINATES

NORTH 100.1 m
SOUTH m
EAST 146.9 m
WEST m
LAT 42 48 51
LONG 82 21 21

SAMPLES

TOP 65.0
BOT 683.0
TRAY 9999-
10000

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
655.0 – 699.0	NA	4500
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
340	81.0	62.2	CEM	0
219	47.6	438.4	CEM	0
139.7	20.8	653.4	CEM	0

COMPLETION DATA

GAS $10^3 m^3/d$
OIL m^3/d
SIP 4500 kPa
FORM A-1 Carbonate
INTRVL m
m
m
PERF ☐ OPEN HOLE ☒

REMARKS

Core Analysis
A-2 Shale at 614.5

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
0.0 – 643.2	CBND	CMPL
0.0 – 682.3	GRNL	Atlas Wire.
0.0 – 682.3	DENL	"
633.0 – 680.4	CALP	"
633.0 – 680.4	PDK	"
438.2 – 678.6	SONL	SCH
–		

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
290.0 –	NA	SUL
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	ANAL
645.0 – 680.5	PRL	991	yes
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB ~~MARKER BOBBY~~	0.0		
DRIFT ~~ROCK BOTTOM~~	4.8		
PORT LAMBTON			
KETTLE POINT	45.5		
HAMILTON	102.0		
MARCELLUS			
DUNDEE	188.3		
COLUMBUS			
LUCAS	218.0		
AMHERSTBURG	298.0		
SYLVANIA			
BOIS BLANC	355.0		
SPRINGVALE			
ORISKANY			
BASS ISLANDS	372.0		
G SHALE	418.2		
F SHALE	424.6		
F SALT			
E CARBONATE	468.8		
D SALT ~~EQUIVALENT~~	489.3		
C SHALE	495.2		
B MARKER	509.8		
B EQUIVALENT			
B SALT	517.0		
B ANHYDRITE			
A2 CARBONATE	581.8		
A2 SALT	622.5		
A2 ANHYDRITE	651.3		
A1 CARBONATE	652.8		
A1 SALT			
A1 ANHYDRITE			
GUELPH			
ERAMOSA			
GOAT ISLAND			
GASPORT/WIARTON			
DECEW			
ROCHESTER			
IRONDEQUOIT			
REYNALES/FOSSIL HILL			
THOROLD			
GRIMSBY			
CABOT HEAD			
MANITOULIN			
WHIRLPOOL			
QUEENSTON			
BLUE MOUNTAIN - GEORG BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Lambton TWP Moore BLK TRAC 8 LOT 17 CON V

WELL NAME Tec Kim Col 54 Moore 8-17-V PERMIT 7380 INIT CLASS OBS

OPERATOR Tecumseh Gas Storage Ltd TARGET SAL CUR STATUS OBS

DRILLING DATA

CONTRACTOR Underwater Gas Developers
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 195.1
BOT LOGGER 730.6
ROTRY TOP 4.8 DRILLER 731.0
BOT 731.0 DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-08-22
SPUD 1988-08-31
COMPTD 1988-09-18
OFFCNF 1988-10-18
WRKOVR
ABNDND

COORDINATES

NORTH 308.7 m
SOUTH m
EAST m
WEST 286.9 m
LAT 42 48 58
LONG 82 21 41

SAMPLES

TOP 66.0
BOT 725.5
TRAY 6893-94

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
340	81.0	59.8	CEM	0
219	47.6	422.3	CEM	0
139.7	20.8	724.4	CEM	0

COMPLETION DATA

GAS $10^3m^3/d$
OIL m^3/d
SIP kPa
FORM A-1 Carbonate
INTRVL 656.0-664.0 m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
0.0 – 706.0	VERL	Atlas Wire
0.0 – 730.0	GRNL	"
425.0 – 730.0	DENL	"
0.0 – 705.5	CBND	"
0.0 – 705.5	CBVD	"
–		
–		

PERF ☒ OPEN HOLE ☐

REMARKS

Core Analysis
A-2 Shale at 617.1

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	rec
652.5 – 725.5	PRL	984	yes
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / [illegible]	0.0		
DRIFT / LAKE BEDROCK	4.8		
PORT LAMBTON			
KETTLE POINT	47.0		
HAMILTON	106.4		
MARCELLUS			
DUNDEE	197.0		
COLUMBUS			
LUCAS	232.5		
AMHERSTBURG	306.0		
SYLVANIA			
BOIS BLANC	355.0		
SPRINGVALE			
ORISKANY			
BASS ISLANDS	378.0		
G SHALE	424.7		
F SHALE	430.9		
F SALT			
E CARBONATE	474.3		
D SALT/EQUIVALENT			
C SHALE	504.3		
B MARKER	516.0		
B EQUIVALENT			
B SALT	528.6		
B ANHYDRITE	584.3		
A2 CARBONATE	585.0		
A2 SALT	625.0		
A2 ANHYDRITE	654.0		
A1 CARBONATE	655.1		
A1 SALT			
A1 ANHYDRITE	691.3		
GUELPH	698.8		
ERAMOSA			
GOAT ISLAND	703.5		
GASPORT/WARTON	708.9		
DECEW			
ROCHESTER	726.5		
IRONDEQUOIT			
REYNALES/FOSSIL HILL			
THOROLD			
GRIMSBY			
CABOT HEAD			
MANITOULIN			
WHIRLPOOL			
QUEENSTON			
BLUE MOUNTAIN - GEORG BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Lambton TWP Moore BLK TRAC 4 LOT 18 CON V

WELL NAME Tec Kim Col 57 Moore 4-18-V PERMIT 7383 INIT CLASS OBS

OPERATOR Tecumseh Gas Storage Ltd TARGET SAL CUR STATUS OBS

DRILLING DATA

CONTRACTOR Underwater Gas Developers
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 195.4
BOT LOGGER 674.9
ROTRY TOP 4.8 DRILLER 677.0
BOT 677.0 DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-08-22
SPUD 1988-09-15
COMPTD 1988-11-03
OFFCNF 1988-12-03
WRKOVR
ABNDND

COORDINATES

NORTH m
SOUTH 659.2 m
EAST 540.3 m
WEST m
LAT 42 49 10
LONG 82 21 59

SAMPLES

TOP 66.0
BOT 677.0
TRAY 4503

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
144.0 –	Show	NA
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244.5	53.5	66.9	CEM	0
178.0	34.2	419.8	CEM	0
114.3	14.0	650.7	CEM	0

COMPLETION DATA

GAS $10^3m^3/d$
OIL m^3/d
SIP kPa
FORM A-1 Carbonate
INTRVL m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
600.0 – 673.9	GRNL	SCH
0.0 – 623.7	CBND	Atlas Wire
0.0 – 623.7	CBVD	"
–		
–		
–		
–		

PERF ☐ OPEN HOLE ☒

REMARKS

A-2 Shale at 616.1
Poor samples - no pick made for Lucas-Amherstberg

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
210.0 –	NA	SUL
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	rec
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / LAKE LEVEL	0.0		
DRIFT/LAKE BEDROCK	4.8		
PORT LAMBTON			
KETTLE POINT	44.8		
HAMILTON	92.7		
MARCELLUS			
DUNDEE	173.2		
COLUMBUS			
LUCAS			
AMHERSTBURG			
SYLVANIA			
BOIS BLANC	325.0		
SPRINGVALE			
ORISKANY			
BASS ISLANDS	353.0		
G SHALE	398.6		
F SHALE	405.1		
F SALT			
E CARBONATE	450.0		
D SALT/EQUIVALENT	476.4		
C SHALE	481.6		
B MARKER	492.8		
B EQUIVALENT			
B SALT	499.9		
B ANHYDRITE			
A2 CARBONATE	579.4		
A2 SALT	624.4		
A2 ANHYDRITE	649.6		
A1 CARBONATE	654.5		
A1 SALT			
A1 ANHYDRITE			
GUELPH			
ERAMOSA			
GOAT ISLAND			
GASPORT/WARTON			
DECEW			
ROCHESTER			
IRONDEQUOIT			
REYNALES/FOSSIL HILL			
THOROLD			
GRIMSBY			
CABOT HEAD			
MANITOULIN			
WHIRLPOOL			
QUEENSTON			
BLUE MOUNTAIN - GEORG BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Lambton TWP Moore BLK TRAC 5 LOT 20 CON III
WELL NAME Brightwest Moore 5-20-III PERMIT 7317 INIT CLASS NPW
OPERATOR Brightwest Resource Explorations Inc. TARGET SAL CUR STATUS DH-ABD

DRILLING DATA

CONTRACTOR	Charles Shaw Drilling		
RIG TYPE	Cable	DEPTHS	
CABLE TOP	1.2	KB ELEV	189.8
BOT	755.0	LOGGER	753.7
ROTRY TOP		DRILLER	755.0
BOT		DEEP END	
DRLG FLD		PLUG BK	

DATES

PERMIT	1988-05-26
SPUD	1988-05-30
COMPTD	1988-06-29
OFFCNF	1989 06-29
WRKOVR	
ABNDND	1988-07-04

COORDINATES

NORTH	563.6	m
SOUTH		m
EAST		m
WEST	107.0	m
LAT	42 47 40	
LONG	82 22 56	

SAMPLES

TOP	53.0
BOT	755.0
TRAY	9207-08

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
274	60.3	52.9	SHO	52.9
220	35.7	207.8	SHO	207.8
178	29.8	444.6	CEM	355.8

COMPLETION DATA

GAS	$10^3 m^3/d$
OIL	m^3/d
SIP	kPa
FORM	
INTRVL	m
	m
	m
PERF ☐	OPEN HOLE ☐

REMARKS

A-2 Shale at 635.0

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
0.0 – 753.7	GRNL	CMPL
0.0 – 753.7	DENL	"
–		
–		
–		
–		

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
239.0 –	50.0	BRA
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS

		TOP	ELEV	THICK
	KB [redacted]	0.0		
	DRIFT [redacted]	1.2		
DEVONIAN	PORT LAMBTON	42.5		
	KETTLE POINT	58.0		
	HAMILTON	131.5		
	MARCELLUS			
	DUNDEE	205.3		
	COLUMBUS			
	LUCAS	233.0		
	AMHERSTBURG	297.0		
	SYLVANIA			
	BOIS BLANC	354.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	375.5		
	G SHALE	411.4		
	F SHALE	418.1		
	F SALT			
	E CARBONATE	463.2		
	D SALT/EQUIVALENT			
	C SHALE	495.1		
	B MARKER	507.5		
	B EQUIVALENT			
	B SALT	515.5		
	B ANHYDRITE			
	A2 CARBONATE	601.5		
	A2 SALT	644.1		

SILURIAN	A2 ANHYDRITE		674.0	
	A1 CARBONATE			
	A1 SALT			
	A1 ANHYDRITE		712.4	
	GUELPH		717.2	
	ERAMOSA			
	GOAT ISLAND		723.3	
	GASPORT/WIARTON		731.0	
	DECEW			
	ROCHESTER		748.4	
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL			
	THOROLD			
	GRIMSBY			
	CABOT HEAD			
	MANITOULIN			
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON			
	BLUE MOUNTAIN - GEORG BAY			
	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
CAMBRIAN				
PRECAMBRIAN				

GEOLOGY BY: T.R. Carter

CTY LAMBTON TWP Moore BLK TRAC 1 LOT 21 CON XII
WELL NAME TEC DOW 9 Moore 1-21-XII PERMIT 7294 INIT CLASS NGS
OPERATOR Tecumseh Gas Storage Ltd TARGET SAL CUR STATUS NGS

DRILLING DATA

CONTRACTOR	Underwater Gas Developers		
RIG TYPE	Rotary	DEPTHS	
CABLE TOP		KB ELEV	194.1
BOT		LOGGER	782.0
ROTRY TOP	4.5	DRILLER	784.5
BOT	784.5	DEEP END	
DRLG FLD		PLUG BK	

DATES

PERMIT	1988-05-11
SPUD	1988-08-17
COMPTD	1988-08-27
OFFCNF	1988-09-26
WRKOVR	
ABNDND	

COORDINATES

NORTH		m
SOUTH	64.0	m
EAST	386.0	m
WEST		m
LAT	42 54 36	
LONG	82 23 09	

SAMPLES

TOP	57.0
BOT	783.0
TRAY	6891-92

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
728.0 –	Show	6653
738.0 – 740.0	Show	6653
748.0 – 749.0	Show	6653
769.0 –	Show	6653
778.0 –	Show	6653
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
340	81.0	57.1	CEM	0
244.5	54.0	440.6	CEM	0
177.8	34.0	696.0	CEM	0

COMPLETION DATA

GAS	$10^3 m^3/d$
OIL	m^3/d
SIP	kPa
FORM	A-1 Carb., Guelph
INTRVL	702.0-782.0 m
	m
	m
PERF ☐	OPEN HOLE ☒

REMARKS

Completion Report

Directional hole, true vertical depth was 771.5.

A-2 Shale at 684.3

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
10.0 – 781.0	GRNL	SCH
700.0 – 781.0	LDT	"
700.0 – 781.0	PEF	"
10.0 – 690.0	CBVD	"
0.0 – 692.2	VERL	Atlas Wire.
–		
–		

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
202.0 –	NA	SUL
358.0 –	NA	SUL
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			

TrueVertical

GEOLOGICAL CONTACTS

		TOP	ELEV	THICK
	KB [redacted]	0.0	0.0	
	DRIFT [redacted]	4.5	4.5	
DEVONIAN	PORT LAMBTON			
	KETTLE POINT	38.5	38.5	
	HAMILTON	67.0	67.0	
	MARCELLUS			
	DUNDEE	154.5	154.5	
	COLUMBUS			
	LUCAS	191.0	190.5	
	AMHERSTBURG	289.0	287.5	
	SYLVANIA			
	BOIS BLANC	331.0	329.2	
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	347.0	344.5	
	G SHALE	414.3	410.8	
	F SHALE	421.0	417.0	
	F SALT	443.7	439.7	
	E CARBONATE	540.2	534.2	
	D SALT [redacted]	565.0	558.0	
	C SHALE	576.0	568.5	
	B MARKER	588.2	580.8	
	B EQUIVALENT			
	B SALT	594.9	587.4	
	B ANHYDRITE			
	A2 CARBONATE	658.0	647.0	
	A2 SALT			

SILURIAN	A2 ANHYDRITE	690.2	681.2	
	A1 CARBONATE			
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH	701.8	692.3	
	ERAMOSA			
	GOAT ISLAND			
	GASPORT/WIARTON			
	DECEW			
	ROCHESTER			
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL			
	THOROLD			
	GRIMSBY			
	CABOT HEAD			
	MANITOULIN			
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON			
	BLUE MOUNTAIN - GEORG BAY			
	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
CAMBRIAN				
PRECAMBRIAN				

GEOLOGY BY: T.R. Carter

CTY Lambton TWP Moore BLK TRAC 2 LOT 21 CON XII

WELL NAME TEC DOW 6 Moore 2-21-XII PERMIT 7291 INIT CLASS NGS

OPERATOR Tecumseh Gas Storage Ltd TARGET SAL CUR STATUS NGS

DRILLING DATA

CONTRACTOR Underwater Gas Developers
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 193.2
BOT LOGGER 773.5
ROTRY TOP 4.0 DRILLER 755.0
BOT 755.0 DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-05-11
SPUD 1988-05-11
COMPTD 1988-05-31
OFFCNF 1988-06-30
WRKOVR
ABNDND

COORDINATES

NORTH m
SOUTH 253.0 m
EAST 80.0 m
WEST m
LAT 42 54 23
LONG 82 23 27

SAMPLES

TOP 71.0
BOT 755.0
TRAY 9200

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
700.0 –	Show	NA
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
340	81.0	67.5	CEM	0
244	54.0	421.3	CEM	0
178	34.0	680.7	CEM	0

COMPLETION DATA

GAS $10^3m^3/d$
OIL m^3/d
SIP kPa
FORM Guelph
INTRVL 684.0-755.0 m
m
m
PERF ☐ OPEN HOLE ☒

REMARKS

A-2 Shale at 668.1

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
20.0 – 772.7	GRNL	SCH
685.0 – 772.7	LDT	"
685.0 – 772.7	PEF	"
5.0 – 664.0	CBVD	"
681.0 – 727.7	DIFS	"
0.0 – 675.0	VERL	Atlas Wire.
–		

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	MM
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / ~~RANGELEVEL~~	0.0		
DRIFT / ~~KNOCKTOWN~~	4.0		
PORT LAMBTON			
KETTLE POINT	39.0		
HAMILTON	71.0		
MARCELLUS			
DUNDEE	157.8		
COLUMBUS			
LUCAS	194.0		
AMHERSTBURG	283.0		
SYLVANIA			
BOIS BLANC	329.0		
SPRINGVALE			
ORISKANY			
BASS ISLANDS	347.0		
G SHALE	410.1		
F SHALE	416.8		
F SALT	440.0		
E CARBONATE	530.4		
D SALT/EQUIVALENT	556.7		
C SHALE	565.6		
B MARKER	575.1		
B EQUIVALENT			
B SALT	581.6		
B ANHYDRITE			
A2 CARBONATE	643.0		
A2 SALT			
A2 ANHYDRITE	674.2		
A1 CARBONATE			
A1 SALT			
A1 ANHYDRITE			
GUELPH	683.5		
ERAMOSA			
GOAT ISLAND			
GASPORT/MARTON			
DECEW			
ROCHESTER			
IRONDEQUOIT			
REYNALES/FOSSIL HILL			
THOROLD			
GRIMSBY			
CABOT HEAD			
MANITOULIN			
WHIRLPOOL			
QUEENSTON			
BLUE MOUNTAIN - GEORG. BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Lambton TWP Moore BLK TRAC 2 LOT 21 CON XII

WELL NAME TEC DOW 7 Moore 2-21-XII PERMIT 7292 INIT CLASS NGS

OPERATOR Tecumseh Gas Storage Ltd TARGET SAL CUR STATUS NGS

DRILLING DATA

CONTRACTOR Underwater Gas Developers
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 193.3
BOT LOGGER 773.5
ROTRY TOP 4.1 DRILLER 774.0
BOT 774.0 DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-05-11
SPUD 1988-06-02
COMPTD 1988-06-16
OFFCNF 1988-07-16
WRKOVR
ABNDND

COORDINATES

NORTH m
SOUTH 143.0 m
EAST 226.0 m
WEST m
LAT 42 54 36
LONG 82 23 20

SAMPLES

TOP 67.0
BOT 774.0
TRAY 6897-98

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
694.0 –	Show	NA
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
340	81.0	64.2	CEM	0
244	54.0	425.9	CEM	0
178	34.0	680.5	CEM	0

COMPLETION DATA

GAS $10^3m^3/d$
OIL m^3/d
SIP kPa
FORM Guelph
INTRVL 684.0-774.0 m
m
m
PERF ☐ OPEN HOLE ☒

REMARKS

Core Analysis
A-2 Shale at 671.0

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
20.0 – 772.7	GRNL	SCH
685.0 – 772.7	LDT	"
685.0 – 772.7	PEF	"
5.0 – 655.0	CBVD	"
90.0 – 680.0	VSP	"
–		
–		

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	MM
683.0 – 741.0	PRL	992	yes
759.0 – 774.0	PRL	992	yes
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / ~~RANGELEVEL~~	0.0		
DRIFT / ~~KNOCKTOWN~~	4.1		
PORT LAMBTON			
KETTLE POINT	40.0		
HAMILTON	71.5		
MARCELLUS			
DUNDEE	158.4		
COLUMBUS			
LUCAS	195.0		
AMHERSTBURG	270.0		
SYLVANIA			
BOIS BLANC	337.0		
SPRINGVALE			
ORISKANY			
BASS ISLANDS	349.5		
G SHALE	410.5		
F SHALE	417.6		
F SALT	441.5		
E CARBONATE	531.2		
D SALT/EQUIVALENT	556.2		
C SHALE	566.0		
B MARKER	577.8		
B EQUIVALENT			
B SALT	585.0		
B ANHYDRITE			
A2 CARBONATE	645.8		
A2 SALT			
A2 ANHYDRITE	677.0		
A1 CARBONATE			
A1 SALT			
A1 ANHYDRITE			
GUELPH	683.8		
ERAMOSA			
GOAT ISLAND			
GASPORT/MARTON			
DECEW			
ROCHESTER			
IRONDEQUOIT			
REYNALES/FOSSIL HILL			
THOROLD			
GRIMSBY			
CABOT HEAD			
MANITOULIN			
WHIRLPOOL			
QUEENSTON			
BLUE MOUNTAIN - GEORG. BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

T.R. Carter

CTY Lambton TWP Moore BLK TRAC 2 LOT 21 CON XII
WELL NAME TEC DOW 8 Moore 2-21-XII PERMIT 7293 INIT CLASS NGS
OPERATOR Tecumseh Gas Storage Ltd TARGET SAL CUR STATUS NGS

DRILLING DATA
CONTRACTOR Underwater Gas Developers
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 194.4
BOT LOGGER 779.0
ROTRY TOP 4.0 DRILLER 780.0
BOT 780.0 DEEP END
DRLG FLD PLUG BK

DATES
PERMIT 1988-05-11
SPUD 1988-06-19
COMPTD 1988-07-03
OFFCNF 1988-08-02
WRKOVR
ABNDND

COORDINATES
NORTH m
SOUTH 64.0 m
EAST 285.0 m
WEST m
LAT 42 54 36
LONG 82 23 09

SAMPLES
TOP 67.7
BOT 779.0
TRAY 10005-06

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
340	81.0	67.7	CEM	0
244	54.0	432.6	CEM	0
178	34.0	685.0	CEM	0

COMPLETION DATA
GAS $10^3m^3/d$
OIL m^3/d
SIP kPa
FORM Guelph
INTRVL 689.0-780.0 m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
0.0 – 778.0	GRNL	SCH
685.0 – 778.0	LDT	"
685.0 – 778.0	PEF	"
5.0 – 655.0	CBVD	"
0.0 – 680.0	VERL	Atlas Wire
–		
–		

PERF ☐ OPEN HOLE ☒

REMARKS
Gypsum, native Sulphur in Lucas
A-2 Shale at 672.3
Directionally drilled. True vertical depth is 774.5m.
Poor samples

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
220.0 –	NA	SUL
198.0 –	NA	
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS

		TOP	ELEV	THICK
	KB / LAKE LEVEL	0.0		
	DRIFT / LAKE BOTTOM	4.0		
DEVONIAN	PORT LAMBTON			
DEVONIAN	KETTLE POINT	41.0		
DEVONIAN	HAMILTON	73.3		
DEVONIAN	MARCELLUS			
DEVONIAN	DUNDEE	158.8		
DEVONIAN	COLUMBUS			
DEVONIAN	LUCAS	193.0		
DEVONIAN	AMHERSTBURG	286.0		
DEVONIAN	SYLVANIA			
DEVONIAN	BOIS BLANC	333.0		
DEVONIAN	SPRINGVALE			
DEVONIAN	ORISKANY			
SILURIAN	BASS ISLANDS	352.0		
SILURIAN	G SHALE	414.2		
SILURIAN	F SHALE	422.6		
SILURIAN	F SALT	443.8		
SILURIAN	E CARBONATE	537.1		
SILURIAN	D SALT/EQUIVALENT	561.6		
SILURIAN	C SHALE	573.0		
SILURIAN	B MARKER	584.0		
SILURIAN	B EQUIVALENT			
SILURIAN	B SALT	593.3		
SILURIAN	B ANHYDRITE			
SILURIAN	A2 CARBONATE	649.0		
SILURIAN	A2 SALT			
SILURIAN	A2 ANHYDRITE	677.8		
SILURIAN	A1 CARBONATE			
SILURIAN	A1 SALT			
SILURIAN	A1 ANHYDRITE			
SILURIAN	GUELPH	689.0		
SILURIAN	ERAMOSA			
SILURIAN	GOAT ISLAND			
SILURIAN	GASPORT/WARTON			
SILURIAN	DECEW			
SILURIAN	ROCHESTER			
SILURIAN	IRONDEQUOIT			
SILURIAN	REYNALES/FOSSIL HILL			
SILURIAN	THOROLD			
SILURIAN	GRIMSBY			
SILURIAN	CABOT HEAD			
SILURIAN	MANITOULIN			
SILURIAN	WHIRLPOOL			
ORDOVICIAN	QUEENSTON			
ORDOVICIAN	BLUE MOUNTAIN - GEORG BAY			
ORDOVICIAN	COLLINGWOOD			
ORDOVICIAN	COBOURG			
ORDOVICIAN	VERULAM			
ORDOVICIAN	KIRKFIELD			
ORDOVICIAN	COBOCONK			
ORDOVICIAN	GULL RIVER			
ORDOVICIAN	SHADOW LAKE			
	CAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Lambton TWP Moore BLK TRAC 6 LOT 21 CON XII
WELL NAME TEC. DOW 4 Moore 6-21-XII PERMIT 7290 INIT CLASS OBS
OPERATOR Tecumseh Gas Storage Ltd TARGET SAL CUR STATUS OBS

DRILLING DATA
CONTRACTOR Underwater Gas Developers
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 195.6
BOT LOGGER 833.0
ROTRY TOP 4.8 DRILLER 833.0
BOT 833.0 DEEP END
DRLG FLD PLUG BK

DATES
PERMIT 1988-05-11
SPUD 1988-08-28
COMPTD 1988-09-09
OFFCNF 1988-10-09
WRKOVR
ABNDND

COORDINATES
NORTH m
SOUTH 771.0 m
EAST 67.0 m
WEST m
LAT 42 54 16
LONG 82 23 28

SAMPLES
TOP 6.0
BOT 833.0
TRAY 9538-39

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
340	81.0	62.0	CEM	0
219	35.7	432.0	CEM	0
139.7	NA	831.0	CEM	0

COMPLETION DATA
GAS $10^3m^3/d$
OIL m^3/d
SIP kPa
FORM A-1 Carbonate
INTRVL 760.5-765.0 m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
10.0 – 832.0	GRNL	SCH
435.0 – 832.0	LDT	"
435.0 – 832.0	PEF	"
10.0 – 800.0	CBVD	"
10.0 – 803.0	CBND	"
0.0 – 800.0	VERL	Atlas Wire
–		

PERF ☒ OPEN HOLE ☐

REMARKS
Core Analysis
A-2 Shale at 712.0

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
199.0 –	NA	SUL
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
750.0 – 833.0	PRL	996	Yes
–			
–			
–			
–			

GEOLOGICAL CONTACTS

		TOP	ELEV	THICK
	KB / LAKE LEVEL	0.0		
	DRIFT / LAKE BOTTOM	4.8		
DEVONIAN	PORT LAMBTON			
DEVONIAN	KETTLE POINT	42.0		
DEVONIAN	HAMILTON	75.0		
DEVONIAN	MARCELLUS			
DEVONIAN	DUNDEE	160.0		
DEVONIAN	COLUMBUS			
DEVONIAN	LUCAS	195.0		
DEVONIAN	AMHERSTBURG	277.0		
DEVONIAN	SYLVANIA			
DEVONIAN	BOIS BLANC	323.0		
DEVONIAN	SPRINGVALE			
DEVONIAN	ORISKANY			
SILURIAN	BASS ISLANDS	342.0		
SILURIAN	G SHALE	406.5		
SILURIAN	F SHALE	413.4		
SILURIAN	F SALT	436.4		
SILURIAN	E CARBONATE	526.0		
SILURIAN	D SALT/BOKENKAMP	552.1		
SILURIAN	C SHALE	562.1		
SILURIAN	B MARKER	577.1		
SILURIAN	B EQUIVALENT			
SILURIAN	B SALT	584.1		
SILURIAN	B ANHYDRITE			
SILURIAN	A2 CARBONATE	675.3		
SILURIAN	A2 SALT	721.3		
SILURIAN	A2 ANHYDRITE	753.1		
SILURIAN	A1 CARBONATE	754.5		
SILURIAN	A1 SALT			
SILURIAN	A1 ANHYDRITE	790.3		
SILURIAN	GUELPH	796.8		
SILURIAN	ERAMOSA			
SILURIAN	GOAT ISLAND	805.3		
SILURIAN	GASPORT/WARTON	814.0		
SILURIAN	DECEW			
SILURIAN	ROCHESTER	830.0		
SILURIAN	IRONDEQUOIT			
SILURIAN	REYNALES/FOSSIL HILL			
SILURIAN	THOROLD			
SILURIAN	GRIMSBY			
SILURIAN	CABOT HEAD			
SILURIAN	MANITOULIN			
SILURIAN	WHIRLPOOL			
ORDOVICIAN	QUEENSTON			
ORDOVICIAN	BLUE MOUNTAIN - GEORG BAY			
ORDOVICIAN	COLLINGWOOD			
ORDOVICIAN	COBOURG			
ORDOVICIAN	VERULAM			
ORDOVICIAN	KIRKFIELD			
ORDOVICIAN	COBOCONK			
ORDOVICIAN	GULL RIVER			
ORDOVICIAN	SHADOW LAKE			
	CAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY	Lambton	TWP	Moore	BLK	TRAC	4-1	LOT	22	CON	VI	
WELL NAME	Imperial Oil 489 Moore 4-1-22-VI			PERMIT	7199		INIT CLASS		BD		
OPERATOR	R.C. Bryant Energy Assoc. Ltd			TARGET	DEV		CUR STATUS		BD		

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	Eagle Drilling Services Inc.			PERMIT	1987-11-09	NORTH		m	TOP	580
RIG TYPE	Rotary	DEPTHS		SPUD	1988-01-07	SOUTH	266.9	m	BOT	695
CABLE TOP		KB ELEV	194.0	COMPTD	1988-01-08	EAST		m	TRAY	4534
BOT		LOGGER	158.5	OFFCNF	1988-02-07	WEST	32.0	m		
ROTRY TOP	1.5	DRILLER	211.8	WRKOVR		LAT	42 50 08			
BOT	211.8	DEEP END		ABNDND		LONG	82 23 43			
DRLG FLD		PLUG BK								

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS	$10^3m^3/d$
–			219.0	35.7	41.8	SHO	NA	OIL	m^3/d
–			140.0	20.8	149.3	CEM	0	SIP	kPa
–			60.3	6.8	188.9	PAC	0	FORM	Lucas
–								INTRVL	195-212 m
–									m
–									m

INITIAL OIL RECORD			LOGGING RECORD			PERF ☐ OPEN HOLE ☒
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	REMARKS
–			50.0 – 520.0	CBND	CMPL	Well was drilled in
–			100.0 – 500.0	DENL	"	1954 with 140mm casing
–			480.0 – 680.0	FFLO	"	cemented to surface
–			–			using 150 sax cement.
–			–			The cement plug was
–			–			drilled out and deepened

INITIAL WATER RECORD			CORING RECORD			
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	mm
189 – 212		SUL	–			
–			–			
–			–			
–			–			
–			–			

to test for disposal.

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK			TOP	ELEV	THICK
	KB / ~~MINEVERTEX~~	0.0				A2 ANHYDRITE			
	DRIFT / ~~KAMESCOSTONY~~	1.5				A1 CARBONATE			
	PORT LAMBTON					A1 SALT			
	KETTLE POINT	39.9				A1 ANHYDRITE			
	HAMILTON	74.7				GUELPH			
	MARCELLUS					ERAMOSA			
DEVONIAN	DUNDEE	130.6			SILURIAN	GOAT ISLAND			
	COLUMBUS					GASPORT/WARTON			
	LUCAS	182.0				DECEW			
	AMHERSTBURG					ROCHESTER			
	SYLVANIA					IRONDEQUOIT			
	BOIS BLANC					REYNALES/FOSSIL HILL			
	SPRINGVALE					THOROLD			
	ORISKANY					GRIMSBY			
	BASS ISLANDS					CABOT HEAD			
	G SHALE					MANITOULIN			
	F SHALE					WHIRLPOOL			
	F SALT					QUEENSTON			
	E CARBONATE					BLUE MOUNTAIN - GEORG BAY			
SILURIAN	D SALT/EQUIVALENT				ORDOVICIAN	COLLINGWOOD			
	C SHALE					COBOURG			
	B MARKER					VERULAM			
	B EQUIVALENT					KIRKFIELD			
	B SALT					COBOCONK			
	B ANHYDRITE					GULL RIVER			
	A2 CARBONATE					SHADOW LAKE			
	A2 SALT					CAMBRIAN			
						PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY	Lambton	TWP	Moore	BLK	TRAC	1	LOT	22	CON	XII	
WELL NAME	TEC DOW 11 Moore 1-22-XII			PERMIT	7295		INIT CLASS		NGS		
OPERATOR	Tecumseh Gas Storage Ltd			TARGET	SAL		CUR STATUS		NGS		

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	Underwater Gas Developers			PERMIT	1988-05-11	NORTH		m	TOP	57.0
RIG TYPE	ROTARY	DEPTHS		SPUD	1988-08-17	SOUTH	183.0	m	BOT	792.0
CABLE TOP		KB ELEV	193.6	COMPTD	1988-08-27	EAST		m	TRAY	9991-
BOT		LOGGER	788.7	OFFCNF	1988-09-26	WEST	285.0	m		92
ROTRY TOP	4.5	DRILLER	792.0	WRKOVR		LAT	42 54 36			
BOT	792.0	DEEP END		ABNDND		LONG	82 23 44			
DRLG FLD		PLUG BK								

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS	$10^3m^3/d$
747.0 –	Show	NA	340	81.0	58.0	CEM	0	OIL	m^3/d
730.0 – 733.0	Show	NA	244.5	NA	444.9	CEM	0	SIP	kPa
771.0 – 777.0	Show	NA	177.8	34.0	708.6	CEM	0	FORM	Guelph
–								INTRVL	728.0-778.7 m
–									m
–									m

INITIAL OIL RECORD			LOGGING RECORD			PERF ☐ OPEN HOLE ☒
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	REMARKS
–			10.0 – 788.0	GRNL	SCH	Completion Plan
–			720.0 – 788.0	LDT	"	
–			720.0 – 788.0	PEF	"	
–			10.0 – 708.0	CBVD	"	Directional Hole, true
–			0.0 – 711.2	VERL	Atlas Wire.	vertical depth is 771.0
–			–			

INITIAL WATER RECORD			CORING RECORD			
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	mm
–			–			
–			–			
–			–			
–			–			
–			–			

A-2 Shale at 702.1

True Vertical –

	GEOLOGICAL CONTACTS	TOP	~~BASE~~	THICK			TOP	~~BASE~~	THICK
	KB / ~~MINEVERTEX~~	0.0	0.0			A2 ANHYDRITE	712.0	697.5	
	DRIFT / ~~KAMESCOSTONY~~	4.5	4.5			A1 CARBONATE			
	PORT LAMBTON					A1 SALT			
	KETTLE POINT	37.5	37.5			A1 ANHYDRITE			
	HAMILTON	71.2	71.2			GUELPH	719.7	704.7	
	MARCELLUS					ERAMOSA			
DEVONIAN	DUNDEE	159.8	159.7		SILURIAN	GOAT ISLAND			
	COLUMBUS					GASPORT/WARTON			
	LUCAS	207.0				DECEW			
	AMHERSTBURG	273.0				ROCHESTER			
	SYLVANIA					IRONDEQUOIT			
	BOIS BLANC	340.0				REYNALES/FOSSIL HILL			
	SPRINGVALE					THOROLD			
	ORISKANY					GRIMSBY			
	BASS ISLANDS	359.5				CABOT HEAD			
	G SHALE	420.8	417.8			MANITOULIN			
	F SHALE	427.6	424.6			WHIRLPOOL			
	F SALT	451.5	428.5			QUEENSTON			
	E CARBONATE	545.0	538.2			BLUE MOUNTAIN - GEORG BAY			
SILURIAN	D SALT/~~EQUIVALENT~~	571.9	562.9		ORDOVICIAN	COLLINGWOOD			
	C SHALE	583.1	574.1			COBOURG			
	B MARKER	596.8	584.8			VERULAM			
	B EQUIVALENT					KIRKFIELD			
	B SALT	601.2	591.2			COBOCONK			
	B ANHYDRITE					GULL RIVER			
	A2 CARBONATE	672.5	660.5			SHADOW LAKE			
	A2 SALT					CAMBRIAN			
						PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

T.R. Carter

CTY Lambton TWP Moore BLK TRAC 1 LOT 22 CON XII
WELL NAME TEC DOW 12 Moore 1-22-XII PERMIT 7296 INIT CLASS NGS
OPERATOR Tecumseh Gas Storage Ltd TARGET SAL CUR STATUS NGS

DRILLING DATA

CONTRACTOR Underwater Gas Developers
RIG TYPE Rotary
CABLE TOP
BOT
ROTRY TOP 4.3
BOT 789.5
DRLG FLD

DEPTHS
KB ELEV 193.6
LOGGER 787.4
DRILLER 789.5
DEEP END
PLUG BK

DATES

PERMIT 1988-05-11
SPUD 1988-07-04
COMPTD 1988-07-16
OFFCNF 1988-08-15
WRKOVR
ABNDND

COORDINATES

NORTH m
SOUTH 332.0 m
EAST m
WEST 285.0 m
LAT 42 54 30
LONG 82 23 44

SAMPLES

TOP 67.0
BOT 789.5
TRAY 10001-02

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
718.0 –	SHOW	792.9
722.0 – 787.4	SHOW	NA
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
340	NA	67.0	CEM	0
244.5	NA	439.9	CEM	0
177.8	NA	708.0	CEM	0

COMPLETION DATA

GAS $10^3m^3/d$
OIL m^3/d
SIP kPa
FORM Guelph
INTRVL 718.0-787.4 m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
25.0 – 786.5	GRNL	SCH
720.0 – 786.5	LDT	"
720.0 – 786.5	PEF	"
120.0 – 716.0	SONL	"
20.0 – 703.2	CBVD	"
0.0 – 703.2	VERL	Atlas wire.
440.0 – 716.0	CALP	"

PERF ☐ OPEN HOLE ☑

REMARKS

A-2 Shale at 698.1

Directional hole, true vertical depth is 771.7

Atlas Wireline Logs Cont
GRNL - 0.0-716.2
DENL - 445.0-716.2

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			

True Vertical

GEOLOGICAL CONTACTS	TOP	XXXXX	THICK
KB / LAKE LEVEL	0.0	0.0	
DRIFT / LAKE BOTTOM	4.3	4.3	
PORT LAMBTON			
KETTLE POINT	40.5	40.5	
HAMILTON	75.3	75.3	
MARCELLUS			
DUNDEE	163.5	163.5	
COLUMBUS			
LUCAS	199.0	198.7	
AMHERSTBURG	280.0	278.3	
SYLVANIA			
BOIS BLANC	346.0	342.2	
SPRINGVALE			
ORISKANY			
BASS ISLANDS	358.0	354.1	
G SHALE	421.1	416.3	
F SHALE	428.0	422.5	
F SALT	452.3	447.0	
E CARBONATE	544.3	536.3	
D SALT/EQUIVALENT	570.6	561.7	
C SHALE	581.0	572.1	
B MARKER	594.5	585.3	
B EQUIVALENT			
B SALT	601.4	591.4	
B ANHYDRITE			
A2 CARBONATE	670.4	658.4	
A2 SALT			

A2 ANHYDRITE	704.3	691.0	
A1 CARBONATE			
A1 SALT			
A1 ANHYDRITE			
GUELPH	715.7	702.2	
ERAMOSA			
GOAT ISLAND			
GASPORT/WIARTON			
DECEW			
ROCHESTER			
IRONDEQUOIT			
REYNALES/FOSSIL HILL			
THOROLD			
GRIMSBY			
CABOT HEAD			
MANITOULIN			
WHIRLPOOL			
QUEENSTON			
BLUE MOUNTAIN - GEORG. BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Lambton TWP Moore BLK TRAC 4 LOT 22 CON XII
WELL NAME TEC DOW 13 Moore 4-22-XII PERMIT 7297 INIT CLASS NGS
OPERATOR Tecumseh Gas Storage Ltd TARGET SAL CUR STATUS NGS

DRILLING DATA

CONTRACTOR Underwater Gas Developers
RIG TYPE Rotary
CABLE TOP
BOT
ROTRY TOP 4.0
BOT 803.0
DRLG FLD

DEPTHS
KB ELEV 193.6
LOGGER 801.3
DRILLER 803.0
DEEP END
PLUG BK

DATES

PERMIT 1988-05-11
SPUD 1988-08-03
COMPTD 1988-08-15
OFFCNF 1988-09-14
WRKOVR
ABNDND

COORDINATES

NORTH m
SOUTH 366.0 m
EAST m
WEST 285.0 m
LAT 42 54 29
LONG 82 23 44

SAMPLES

TOP 70.0
BOT 805.0
TRAY 9993-94

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
742.0 –	SHOW	NA
770.0 –	SHOW	NA
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
340	81.0	70.5	CEM	0
244.5	54.0	440.0	CEM	0
177.8	34.0	725.0	CEM	0

COMPLETION DATA

GAS $10^3m^3/d$
OIL m^3/d
SIP kPa
FORM A-1 Carb., Guelph
INTRVL 733.0-801.3 m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
10.0 – 800.0	GRNL	SCH
725.0 – 800.0	LDT	"
725.0 – 800.0	PEF	"
10.0 – 719.0	CBVD	"
0.0 – 720.2	VERL	Atlas Wire.
–		
–		

PERF ☐ OPEN HOLE ☑

REMARKS

Completion Plan

Directional Hole, true vertical depth is 772.3

A-2 Shale at 710.9

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
174.0 –	NA	SLT
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			

True Vertical

GEOLOGICAL CONTACTS	TOP	XXXX	THICK
KB / LAKE LEVEL	0.0	0.0	
DRIFT / LAKE BOTTOM	4.0	4.0	
PORT LAMBTON			
KETTLE POINT	38.0	38.0	
HAMILTON	73.8	73.8	
MARCELLUS			
DUNDEE	161.2	161.2	
COLUMBUS			
LUCAS	195.5	195.3	
AMHERSTBURG	288.5	287.5	
SYLVANIA			
BOIS BLANC	337.0	335.0	
SPRINGVALE			
ORISKANY			
BASS ISLANDS	362.0	358.7	
G SHALE	419.5	414.0	
F SHALE	426.6	420.1	
F SALT	452.0	455.0	
E CARBONATE	550.0	538.0	
D SALT/EQUIVALENT	575.9	560.0	
C SHALE	585.6	567.6	
B MARKER	600.8	582.3	
B EQUIVALENT			
B SALT	607.3	588.8	
B ANHYDRITE			
A2 CARBONATE	681.3	656.3	
A2 SALT			

A2 ANHYDRITE	719.0	694.0	
A1 CARBONATE			
A1 SALT			
A1 ANHYDRITE			
GUELPH	728.1	702.1	
ERAMOSA			
GOAT ISLAND			
GASPORT/WIARTON			
DECEW			
ROCHESTER			
IRONDEQUOIT			
REYNALES/FOSSIL HILL			
THOROLD			
GRIMSBY			
CABOT HEAD			
MANITOULIN			
WHIRLPOOL			
QUEENSTON			
BLUE MOUNTAIN - GEORG. BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY: Lambton TWP: Moore BLK: TRAC: 4 LOT: 22 CON: XII

WELL NAME: TEC DOW 14 Moore 4-22-XII PERMIT: 7298 INIT CLASS: NGS

OPERATOR: Tecumseh Gas Storage Ltd TARGET: SAL CUR STATUS: NGS

DRILLING DATA

CONTRACTOR: Underwater Gas Developers
RIG TYPE: Rotary DEPTHS
CABLE TOP: KB ELEV: 194.9
BOT: LOGGER: 786.5
ROTRY TOP: 4.9 DRILLER: 786.5
BOT: 786.5 DEEP END:
DRLG FLD: PLUG BK:

DATES

PERMIT: 1988-05-11
SPUD: 1988-06-28
COMPTD: 1988-07-14
OFFCNF: 1988-08-13
WRKOVR:
ABNDND:

COORDINATES

NORTH: m
SOUTH: 485.0 m
EAST: m
WEST: 285.0 m
LAT: 42 54 26
LONG: 82 23 45

SAMPLES

TOP: 6.0
BOT: 786.0
TRAY: 10007-08

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
726.0 –	NA	896.3
787.0 –	NA	965.3
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
340.0	NA	69.0	CEM	0
244.5	NA	434.3	CEM	0
177.8	NA	720.0	CEM	0

COMPLETION DATA

GAS: $10^3 m^3/d$
OIL: m^3/d
SIP: kPa
FORM: Guelph
INTRVL: 720.0-786.5 m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
10.0 – 785.6	GRNL	SCH
725.0 – 785.6	LDT	"
725.0 – 785.6	PEF	"
17.0 – 707.0	CBVD	"
295.0 – 711.0	CBND	"
0.0 – 706.0	VERL	Atlas Wire
–		

PERF ☐ OPEN HOLE ☒

REMARKS

A-2 Shale at 693.3
Directional Hole, true vertical depth is 771.6
Gypsum in Lucas

INITIAL WATER RECORD

INTERVAL	STAT. LEV	TYPE
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	ANAL
725.5 – 742.0	PRL	967	
–			
–			
–			
–			

GEOLOGICAL CONTACTS	Measured TOP	True Vertical	
KB / GREENSVILLE	0.0	0.0	
DRIFT / BINBROOKE	4.9	4.9	
DEVONIAN: PORT LAMBTON			
DEVONIAN: KETTLE POINT	41.0	41.0	
DEVONIAN: HAMILTON	77.0	77.0	
DEVONIAN: MARCELLUS			
DEVONIAN: DUNDEE	164.6	164.6	
DEVONIAN: COLUMBUS			
DEVONIAN: LUCAS	201.0	200.8	
DEVONIAN: AMHERSTBURG	276.0	274.4	
DEVONIAN: SYLVANIA			
DEVONIAN: BOIS BLANC	344.0	341.3	
DEVONIAN: SPRINGVALE			
DEVONIAN: ORISKANY			
SILURIAN: BASS ISLANDS	356.0	352.5	
SILURIAN: G SHALE	421.1	416.2	
SILURIAN: F SHALE	428.8	422.9	
SILURIAN: F SALT	456.0	448.0	
SILURIAN: E CARBONATE	543.2	534.2	
SILURIAN: D SALT/EQUIVALENT	569.2	559.1	
SILURIAN: C SHALE	579.7	569.6	
SILURIAN: B MARKER	592.7	582.2	
SILURIAN: B EQUIVALENT			
SILURIAN: B SALT	598.6	588.0	
SILURIAN: B ANHYDRITE			
SILURIAN: A2 CARBONATE	666.2	653.3	
SILURIAN: A2 SALT			
A2 ANHYDRITE	699.0	685.4	
A1 CARBONATE			
A1 SALT			
A1 ANHYDRITE			
GUELPH	711.2	697.2	
ERAMOSA			
GOAT ISLAND			
GASPORT/WARTON			
DECEW			
ROCHESTER			
IRONDEQUOIT			
REYNALES/FOSSIL HILL			
THOROLD			
GRIMSBY			
CABOT HEAD			
MANITOULIN			
WHIRLPOOL			
ORDOVICIAN: QUEENSTON			
ORDOVICIAN: BLUE MOUNTAIN - GEORG. BAY			
ORDOVICIAN: COLLINGWOOD			
ORDOVICIAN: COBOURG			
ORDOVICIAN: VERULAM			
ORDOVICIAN: KIRKFIELD			
ORDOVICIAN: COBOCONK			
ORDOVICIAN: GULL RIVER			
ORDOVICIAN: SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY: Lambton TWP: Moore BLK: TRAC: 1 LOT: 23 CON: XII

WELL NAME: TEC DOW 15 Moore 1-23-XII PERMIT: 7299 INIT CLASS: NGS

OPERATOR: Tecumseh Gas Storage Ltd TARGET: SAL CUR STATUS: NGS

DRILLING DATA

CONTRACTOR: Underwater Gas Developers
RIG TYPE: Rotary DEPTHS
CABLE TOP: KB ELEV: 193.4
BOT: LOGGER: 775.5
ROTRY TOP: 4.0 DRILLER: 781.0
BOT: 781.0 DEEP END:
DRLG FLD: PLUG BK:

DATES

PERMIT: 1988-05-11
SPUD: 1988-08-01
COMPTD: 1988-08-14
OFFCNF: 1988-09-13
WRKOVR:
ABNDND:

COORDINATES

NORTH: m
SOUTH: 268.0 m
EAST: m
WEST: 26.0 m
LAT: 42 54 33
LONG: 82 23 58

SAMPLES

TOP: 0.0
BOT: 766.0
TRAY: 4441

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
710.0 –	Show	NA
716.0 –	Show	NA
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
340	81.0	68.2	CEM	0
244.5	54.0	442.0	CEM	0
177.8	34.0	694.0	CEM	0

COMPLETION DATA

GAS: $10^3 m^3/d$
OIL: m^3/d
SIP: kPa
FORM: Guelph
INTRVL: 698.0-775.5 m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
10.0 – 774.7	GRNL	SCH
680.0 – 774.7	LDT	"
680.0 – 774.7	PEF	"
0.0 – 686.2	VERL	Atlas Wire
–		
–		
–		

PERF ☐ OPEN HOLE ☒

REMARKS

Completion Plan
Directional Hole, true vertical depth is 768.9
A-2 Shale at 678.0

INITIAL WATER RECORD

INTERVAL	STAT. LEV	TYPE
204.0 –	NA	SUL
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	ANAL
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP TRUE VERTICAL	THICK	
KB / LAKE LEVEL	0.0	0.0	
DRIFT / LAKE BOTTOM	4.0	4.0	
DEVONIAN: PORT LAMBTON			
DEVONIAN: KETTLE POINT	39.0	39.0	
DEVONIAN: HAMILTON	77.1	77.1	
DEVONIAN: MARCELLUS			
DEVONIAN: DUNDEE	163.8	163.8	
DEVONIAN: COLUMBUS			
DEVONIAN: LUCAS	234.0	234.0	
DEVONIAN: AMHERSTBURG	278.0	277.5	
DEVONIAN: SYLVANIA			
DEVONIAN: BOIS BLANC	330.0	329.3	
DEVONIAN: SPRINGVALE			
DEVONIAN: ORISKANY			
SILURIAN: BASS ISLANDS	360.5	359.7	
SILURIAN: G SHALE	418.1	417.0	
SILURIAN: F SHALE	424.8	423.6	
SILURIAN: F SALT	448.5	447.2	
SILURIAN: E CARBONATE	535.4	533.4	
SILURIAN: D SALT/EQUIVALENT	560.3	558.1	
SILURIAN: C SHALE	570.0	567.1	
SILURIAN: B MARKER	582.3	579.3	
SILURIAN: B EQUIVALENT			
SILURIAN: B SALT	588.6	585.4	
SILURIAN: B ANHYDRITE			
SILURIAN: A2 CARBONATE	650.3	646.2	
SILURIAN: A2 SALT			
A2 ANHYDRITE	689.9	685.1	
A1 CARBONATE			
A1 SALT			
A1 ANHYDRITE			
GUELPH	696.3	691.4	
ERAMOSA			
GOAT ISLAND			
GASPORT/WARTON			
DECEW			
ROCHESTER			
IRONDEQUOIT			
REYNALES/FOSSIL HILL			
THOROLD			
GRIMSBY			
CABOT HEAD			
MANITOULIN			
WHIRLPOOL			
ORDOVICIAN: QUEENSTON			
ORDOVICIAN: BLUE MOUNTAIN - GEORG. BAY			
ORDOVICIAN: COLLINGWOOD			
ORDOVICIAN: COBOURG			
ORDOVICIAN: VERULAM			
ORDOVICIAN: KIRKFIELD			
ORDOVICIAN: COBOCONK			
ORDOVICIAN: GULL RIVER			
ORDOVICIAN: SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

T.R. Carter

CTY.	Lambton	TWP	Moore	BLK	TRAC 4	LOT 23	CON XII		
WELL NAME	TEC DOW 16 Moore 4-23-XII			PERMIT	7300	INIT CLASS	NGS		
OPERATOR	Tecumseh Gas Storage Ltd			TARGET	SAL	CUR STATUS	NGS		

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	Under Water Gas Developers			PERMIT	1988-05-11	NORTH		m	TOP	0.0
RIG TYPE	Rotary	DEPTHS		SPUD	1988-07-19	SOUTH	411.0	m	BOT	778.0
CABLE TOP		KB ELEV	193.8	COMPTD	1988-07-30	EAST		m	TRAY	9546-
BOT		LOGGER	777.0	OFFCNF	1988-08-29	WEST	26.0	m		47
ROTRY TOP	4.3	DRILLER	778.0	WRKOVR		LAT	42 54 28			
BOT	778.0	DEEP END		ABNOND		LONG	82 23 58			
DRLG FLD		PLUG BK								

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS	$10^3 m^3/d$
–			340	81.0	67.0	CEM	0	OIL	m^3/d
–			244	54.0	439.9	CEM	0	SIP	kPa
–			178	34.0	680.0	CEM	0	FORM	Guelph
–								INTRVL	m
–									m
–									m

INITIAL OIL RECORD			LOGGING RECORD			PERF ☐	OPEN HOLE ☒
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	REMARKS	
–			25.0 – 776.7	GRNL	SCH		
–			680.0 – 776.7	LDT	"	Completion Plan	
–			680.0 – 776.7	PEF	"		
–			15.0 – 677.0	CBVD	"	Directional hole, true	
–			0.0 – 675.0	VERL	Atlas Wire	vertical depth is 772.2	
–			–				

INITIAL WATER RECORD								
INTERVAL	STAT LEV	TYPE	A-2 Shale at 671.0					
–			CORING RECORD					
–			INTERVAL	LOCATION	NO	mm		
–			–					
–			–					
–			–					
–			–					
–			–					

True Vertical

GEOLOGICAL CONTACTS		TOP	ELEV	THICK		TOP	ELEV	THICK
	KB / LAKE LEVEL	0.0	0.0		A2 ANHYDRITE	676.2	672.1	
	DRIFT / LAKE BOTTOM	4.3	4.3		A1 CARBONATE			
	PORT LAMBTON				A1 SALT			
	KETTLE POINT	40.5	40.5		A1 ANHYDRITE			
	HAMILTON	79.0	79.0		GUELPH	684.3	680.2	
	MARCELLUS				ERAMOSA			
DEVONIAN	DUNDEE	166.2	166.2	SILURIAN	GOAT ISLAND			
	COLUMBUS				GASPORT/MARTON			
	LUCAS	202.5	202.5		DECEW			
	AMHERSTBURG	283.0	282.5		ROCHESTER			
	SYLVANIA				IRONDEQUOIT			
	BOIS BLANC	340.0	339.0		REYNALES/FOSSIL HILL			
	SPRINGVALE				THOROLD			
	ORISKANY				GRIMSBY			
	BASS ISLANDS	357.0	355.7		CABOT HEAD			
	G SHALE	419.9	418.0		MANITOULIN			
	F SHALE	426.6	424.5		WHIRLPOOL			
	F SALT	451.0	448.8		QUEENSTON			
	E CARBONATE	585.0	582.2		BLUE MOUNTAIN - GEORG BAY			
SILURIAN	D SALT/EQUIVALENT	559.6	556.3	ORDOVICIAN	COLLINGWOOD			
	C SHALE	568.8	565.5		COBOURG			
	B MARKER	580.3	576.7		VERULAM			
	B EQUIVALENT				KIRKFIELD			
	B SALT	586.4	582.7		COBOCONK			
	B ANHYDRITE				GULL RIVER			
	A2 CARBONATE	647.1	642.8		SHADOW LAKE			
	A2 SALT				CAMBRIAN			
					PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY	Lambton	TWP	Moore	BLK	TRAC 4	LOT 23	CON XII		
WELL NAME	TEC DOW 17 Moore 4-23-XII			PERMIT	7301	INIT CLASS	NGS		
OPERATOR	Tecumseh Gas Storage Ltd			TARGET	SAL	CUR STATUS	NGS		

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	Underwater Gas Developers			PERMIT	1988-05-11	NORTH		m	TOP	0.0
RIG TYPE	Rotary	DEPTHS		SPUD	1988-07-16	SOUTH	649.0	m	BOT	779.0
CABLE TOP		KB ELEV	194.7	COMPTD	1988-07-29	EAST		m	TRAY	6895-
BOT		LOGGER	779.2	OFFCNF	1988-08-28	WEST	26.0	m		96
ROTRY TOP	4.8	DRILLER	780.2	WRKOVR		LAT	42 54 20			
BOT	780.2	DEEP END		ABNOND		LONG	82 23 58			
DRLG FLD		PLUG BK								

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS	$10^3 m^3/d$
685.0 – 779.2	Show	NA	340.0	81.1	66.0	CEM	0	OIL	m^3/d
–			244.5	NA	435.2	CEM	0	SIP	kPa
–			177.8	NA	678.0	CEM	0	FORM	Guelph
–								INTRVL	684.5-779.2 m
–									m
–									m

INITIAL OIL RECORD			LOGGING RECORD			PERF ☐	OPEN HOLE ☒
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	REMARKS	
–			25.0 – 778.4	GRNL	SCH		
–			680.0 – 778.4	LDT	"	Directional hole, true	
–			680.0 – 778.4	PEF	"	vertical depth 772.6	
–			16.0 – 675.1	CBVD	"		
–			0.0 – 674.0	VERL	Atlas Wire	A-2 Shale at 670.0	
–			–				

INITIAL WATER RECORD								
INTERVAL	STAT LEV	TYPE						
–			CORING RECORD					
–			INTERVAL	LOCATION	NO	mm		
–			–					
–			–					
–			–					
–			–					
–			–					

GEOLOGICAL CONTACTS		TOP	ELEV	THICK		TOP	ELEV	THICK
	KB / [illegible]	0.0			A2 ANHYDRITE	675.3		
	DRIFT / [illegible]	4.8			A1 CARBONATE	684.8		
	PORT LAMBTON				A1 SALT			
	KETTLE POINT	40.0			A1 ANHYDRITE			
	HAMILTON	82.3			GUELPH			
	MARCELLUS				ERAMOSA			
DEVONIAN	DUNDEE	169.0		SILURIAN	GOAT ISLAND			
	COLUMBUS				GASPORT/MARTON			
	LUCAS	200.5			DECEW			
	AMHERSTBURG	278.0			ROCHESTER			
	SYLVANIA				IRONDEQUOIT			
	BOIS BLANC	340.0			REYNALES/FOSSIL HILL			
	SPRINGVALE				THOROLD			
	ORISKANY				GRIMSBY			
	BASS ISLANDS	357.5			CABOT HEAD			
	G SHALE	419.3			MANITOULIN			
	F SHALE	426.0			WHIRLPOOL			
	F SALT	450.6			QUEENSTON			
	E CARBONATE	529.3			BLUE MOUNTAIN - GEORG BAY			
SILURIAN	D SALT/EQUIVALENT	555.1		ORDOVICIAN	COLLINGWOOD			
	C SHALE	564.5			COBOURG			
	B MARKER	576.2			VERULAM			
	B EQUIVALENT				KIRKFIELD			
	B SALT	582.2			COBOCONK			
	B ANHYDRITE				GULL RIVER			
	A2 CARBONATE	645.3			SHADOW LAKE			
	A2 SALT				CAMBRIAN			
					PRECAMBRIAN			

GEOLOGY BY: T.R.Carter

CTY: Lambton TWP: Moore BLK: TRAC: LOT 23 CON XII

WELL NAME: DM-2 Moore 23-XII PERMIT: 7229 INIT CLASS: OBS

OPERATOR: Dow Chemical Canada Inc. TARGET: DEV CUR STATUS: OBS

DRILLING DATA			DATES		COORDINATES		SAMPLES	
CONTRACTOR:	B and S Rotary Drilling Ltd		PERMIT	1988-01-25	NORTH:	m	TOP	98.0
RIG TYPE:	Rotary	DEPTHS	SPUD:	1988-03-14	SOUTH:	538.9 m	BOT	264.0
CABLE TOP:		KB ELEV 192.9	COMPTD:	1988-03-19	EAST:	186.5 m	TRAY	7641
BOT:		LOGGER: 308.5	OFFCNF:	1988-04-18	WEST:	m		
ROTRY TOP:	3.6	DRILLER: 308.5	WRKOVR:		LAT:	42 54 24		
BOT:	308.5	DEEP END:	ABNDND:		LONG:	82 24 16		
DRLG FLD:		PLUG BK:						

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS	$10^3 m^3/d$
–			244	53.6	98.1	CEM	0	OIL	m^3/d
–			178	29.8	186.2	CEM	0	SIP	kPa
–								FORM	
–								INTRVL:	m
–									m
–			LOGGING RECORD						m

INITIAL OIL RECORD			INTERVAL	TYPE	COMPANY	PERF ☐	OPEN HOLE ☒
INTERVAL	FLOW	DENSITY	0 – 305.1	GR/NL	CMPL	REMARKS	
–			0 – 305.1	DEN/L	"		
–			–			Poor samples	
–			–				
–			–				
–			–				

INITIAL WATER RECORD			CORING RECORD			
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	MM
–			–			
–			–			
–			–			
–			–			
–			–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / KELLY BUSHING	0.0		
	DRIFT / LAKE BOTTOM	3.6		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON	98.0		
	MARCELLUS			
	DUNDEE	168.2		
	COLUMBUS			
	LUCAS	207.0?		
	AMHERSTBURG			
	SYLVANIA			
	BOIS BLANC			
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS			
	G SHALE			
	F SHALE			
	F SALT			
	E CARBONATE			
	D SALT/EQUIVALENT			
	C SHALE			
	B MARKER			
	B EQUIVALENT			
	B SALT			
	B ANHYDRITE			
	A2 CARBONATE			
	A2 SALT			

SILURIAN	A2 ANHYDRITE		
	A1 CARBONATE		
	A1 SALT		
	A1 ANHYDRITE		
	GUELPH		
	ERAMOSA		
	GOAT ISLAND		
	GASPORT/WARTON		
	DECEW		
	ROCHESTER		
	IRONDEQUOIT		
	REYNALES/FOSSIL HILL		
	THOROLD		
	GRIMSBY		
	CABOT HEAD		
	MANITOULIN		
	WHIRLPOOL		
ORDOVICIAN	QUEENSTON		
	BLUE MOUNTAIN - GEORG. BAY		
	COLLINGWOOD		
	COBOURG		
	VERULAM		
	KIRKFIELD		
	COBOCONK		
	GULL RIVER		
	SHADOW LAKE		
	CAMBRIAN		
	PRECAMBRIAN		

GEOLOGY BY: T.R.Carter

CTY Lambton TWP: Moore BLK: TRAC: LOT 23 CON XII

WELL NAME DM-3 Moore 23-XII PERMIT 7230 INIT CLASS OBS

OPERATOR Dow Chemical Canada Inc. TARGET DEV CUR STATUS OBS

DRILLING DATA			DATES		COORDINATES		SAMPLES	
CONTRACTOR	B and S Rotary Drilling Ltd		PERMIT	1988-01-25	NORTH	m	TOP	98.0
RIG TYPE	Rotary	DEPTHS	SPUD	1988-03-02	SOUTH	945.8 m	BOT	308.0
CABLE TOP		KB ELEV 194.6	COMPTD	1988-03-07	EAST	253.3 m	TRAY	7642
BOT		LOGGER	OFFCNF	1988-04-06	WEST	m		
ROTRY TOP	3.6	DRILLER 308.2	WRKOVR		LAT	42 54 11		
BOT	308.2	DEEP END	ABNDND		LONG	82 24 14		
DRLG FLD		PLUG BK						

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS	$10^3 m^3/d$
–			244	53.6	98.4	CEM	0	OIL	m^3/d
–			178	29.8	186.9	CEM	0	SIP	kPa
–								FORM	
–								INTRVL:	m
–									m
–			LOGGING RECORD						m

INITIAL OIL RECORD			INTERVAL	TYPE	COMPANY	PERF ☐	OPEN HOLE ☒
INTERVAL	FLOW	DENSITY	0.0 – 304.1	GR/NL	CMPL	REMARKS	
–			0.0 – 304.1	DEN/L	"		
–			–				
–			–				
–			–				
–			–				

INITIAL WATER RECORD			CORING RECORD			
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	MM
–			–			
–			–			
–			–			
–			–			
–			–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / KELLY BUSHING	0.0		
	DRIFT / LAKE BOTTOM	3.6		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON	98.0		
	MARCELLUS			
	DUNDEE	171.9		
	COLUMBUS			
	LUCAS	203.0		
	AMHERSTBURG	301.0		
	SYLVANIA			
	BOIS BLANC			
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS			
	G SHALE			
	F SHALE			
	F SALT			
	E CARBONATE			
	D SALT/EQUIVALENT			
	C SHALE			
	B MARKER			
	B EQUIVALENT			
	B SALT			
	B ANHYDRITE			
	A2 CARBONATE			
	A2 SALT			

SILURIAN	A2 ANHYDRITE		
	A1 CARBONATE		
	A1 SALT		
	A1 ANHYDRITE		
	GUELPH		
	ERAMOSA		
	GOAT ISLAND		
	GASPORT/WARTON		
	DECEW		
	ROCHESTER		
	IRONDEQUOIT		
	REYNALES/FOSSIL HILL		
	THOROLD		
	GRIMSBY		
	CABOT HEAD		
	MANITOULIN		
	WHIRLPOOL		
ORDOVICIAN	QUEENSTON		
	BLUE MOUNTAIN - GEORG. BAY		
	COLLINGWOOD		
	COBOURG		
	VERULAM		
	KIRKFIELD		
	COBOCONK		
	GULL RIVER		
	SHADOW LAKE		
	CAMBRIAN		
	PRECAMBRIAN		

GEOLOGY BY: T.R.Carter

T.R. Carter

CTY Lambton TWP Plympton SUB TRAC 2 LOT 12 CON VII
WELL NAME Milton Res. Plympton 2-12-VII PERMIT 7391 INIT CLASS NPW
OPERATOR Milton Resources TARGET SAL CUR STATUS DH-ABD

DRILLING DATA

CONTRACTOR	Rawlings Drilling Co.		
RIG TYPE	Cable	DEPTHS	
CABLE TOP	1.2	KB ELEV	205.7
BOT	784.3	LOGGER	782.4
ROTRY TOP		DRILLER	784.3
BOT		DEEP END	
DRLG FLD		PLUG BK	

DATES

PERMIT	1988-09-06
SPUD	1988-11-01
COMPTD	1988-12-12
OFFCNF	1989-12-12
WRKOVR	
ABNDND	1988-12-16

COORDINATES

NORTH		m
SOUTH	167.6	m
EAST	150.9	m
WEST		m
LAT	43 00 55	
LONG	82 08 45	

SAMPLES

TOP	32.0
BOT	784.3
TRAY	9252-
	53

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
273	75.9	31.9	SHO	31.9
219	53.6	146.3	SHO	146.3
178	29.8	406.0	CEM	307.0

COMPLETION DATA

GAS	$10^3 m^3/d$
OIL	m^3/d
SIP	kPa
FORM	
INTRVL	m
	m
	m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
0.0 – 782.4	GRNL	CMPL
–		
–		
–		
–		
–		

PERF ☐ OPEN HOLE ☐

REMARKS

A-2 Shale at 684.0

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
30.5 –	NA	FRE
169.2 –	19.8	SUL
258.5 –	39.6	SUL
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	ANAL
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / LAKEVIEW	0.0		
DRIFT / LAKE ERIE TILL	1.2		
DEVONIAN: PORT LAMBTON			
KETTLE POINT	32.0		
HAMILTON	50.0		
MARCELLUS			
DUNDEE	143.9		
COLUMBUS			
LUCAS	184.7		
AMHERSTBURG	272.5		
SYLVANIA			
BOIS BLANC	321.0		
SPRINGVALE			
ORISKANY			
SILURIAN: BASS ISLANDS	339.5		
G SHALE	390.4		
F SHALE	397.2		
F SALT	423.4		
E CARBONATE	487.7		
D SALT/EQUIVALENT	510.8		
C SHALE	521.8		
B MARKER	536.4		
B EQUIVALENT			
B SALT	543.8		
B ANHYDRITE			
A2 CARBONATE	647.4		
A2 SALT	692.2		
SILURIAN: A2 ANHYDRITE	724.2		
A1 CARBONATE	725.1		
A1 SALT			
A1 ANHYDRITE	762.3		
GUELPH	768.4		
ERAMOSA			
GOAT ISLAND	775.5		
GASPORT/WIARTON			
DECEW			
ROCHESTER			
IRONDEQUOIT			
REYNALES/FOSSIL HILL			
THOROLD			
GRIMSBY			
CABOT HEAD			
MANITOULIN			
WHIRLPOOL			
ORDOVICIAN: QUEENSTON			
BLUE MOUNTAIN - GEORG BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R.Carter

CTY Lambton TWP Sombra SUB TRAC 5 LOT 2 CON A
WELL NAME Hadley-Midway Sombra 5-5-X PERMIT 7325 INIT CLASS NPW
OPERATOR Midway Petroleum Co. TARGET SAL CUR STATUS GS-ABD

DRILLING DATA

CONTRACTOR	Rawlings Drilling Co.		
RIG TYPE	Cable	DEPTHS	
CABLE TOP	1.0	KB ELEV	183.7
BOT	684.3	LOGGER	684.3
ROTRY TOP		DRILLER	684.3
BOT		DEEP END	
DRLG FLD		PLUG BK	

DATES

PERMIT	1988-06-10
SPUD	1988-08-30
COMPTD	1988-10-13
OFFCNF	1989-10-13
WRKOVR	
ABNDND	1988-10-18

COORDINATES

NORTH	408.5	m
SOUTH		m
EAST		m
WEST	98.6	m
LAT	42 41 46	
LONG	82 25 48.5	

SAMPLES

TOP	50.9
BOT	684.3
TRAY	6834

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
45.7 –	Show	NA
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
273	60.3	51.2	SHO	51.2
219	35.7	184.7	SHO	184.7
177	29.8	382.5	CEM	284.7

COMPLETION DATA

GAS	$10^3 m^3/d$
OIL	m^3/d
SIP	kPa
FORM	
INTRVL	m
	m
	m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
0.0 – 684.3	GRNL	CMPL
545.6 – 684.3	DENL	"
–		
–		
–		
–		
–		

PERF ☐ OPEN HOLE ☐

REMARKS

A-2 Shale at 584.3

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
47.2 –	NA	FRE
210.3 –	27.4	SUL
548.6 –	NA	SAL
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	ANAL
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / LAKEVIEW	0.0		
DRIFT / LAKE ERIE TILL	1.0		
DEVONIAN: PORT LAMBTON			
KETTLE POINT	69.2		
HAMILTON	120.1		
MARCELLUS			
DUNDEE	184.7		
COLUMBUS			
LUCAS	211.0		
AMHERSTBURG	270.7		
SYLVANIA			
BOIS BLANC	315.0		
SPRINGVALE			
ORISKANY			
SILURIAN: BASS ISLANDS	330.7		
G SHALE	373.1		
F SHALE	379.2		
F SALT			
E CARBONATE	423.1		
D SALT/EQUIVALENT			
C SHALE	454.2		
B MARKER	466.3		
B EQUIVALENT			
B SALT	473.7		
B ANHYDRITE			
A2 CARBONATE	550.2		
A2 SALT	591.3		
SILURIAN: A2 ANHYDRITE	614.2		
A1 CARBONATE	615.7		
A1 SALT			
A1 ANHYDRITE	654.4		
GUELPH	656.5		
ERAMOSA			
GOAT ISLAND	664.5		
GASPORT/WIARTON	672.7		
DECEW			
ROCHESTER			
IRONDEQUOIT			
REYNALES/FOSSIL HILL			
THOROLD			
GRIMSBY			
CABOT HEAD			
MANITOULIN			
WHIRLPOOL			
ORDOVICIAN: QUEENSTON			
BLUE MOUNTAIN - GEORG BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY	Lambton	TWP	Sombra	BLK	TRAC 3	LOT 8	CON VI
WELL NAME	Raen Smith et al Sombra 3-8-VI			PERMIT	7204	INIT CLASS	DEV
OPERATOR	Raen Petroleum			TARGET	SAL	CUR STATUS	CS-OS-ABD

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	Ron Smith Drilling			PERMIT	1987-11-25	NORTH		m	TOP	39.6
RIG TYPE	Cable	DEPTHS		SPUD	1988-01-04	SOUTH	442-0	m	BOT	609.6
CABLE TOP	0.7	KB ELEV	178.3	COMPTD	1988-03-18	EAST	107.0	m	TRAY	9414
BOT	609.6	LOGGER		OFFCNF	1988-04-17	WEST		m		
ROTRY TOP		DRILLER	609.6	WRKOVR		LAT	42 39 02			
BOT		DEEP END		ABNDND	1988-04-25	LONG	82 24 54			
DRLG FLD		PLUG BK								

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS	$10^3m^3/d$
582.2 – 591.3	Show	NA	273	NA	39.6	SHO	39.6	OIL	m^3/d
–			219	NA	164.6	SHO	164.6	SIP	kPa
–			178	NA	361.5	CEM	270.1	FORM	A-1 Carbonate
–								INTRVL	m
–									m
–									m

INITIAL OIL RECORD			LOGGING RECORD			PERF ☐	OPEN HOLE ☐
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	REMARKS	
586.1 –	Show	NA	–				
–			–			A-2 Shale at 544.5	
–			–				
–			–				
–			–				

INITIAL WATER RECORD			CORING RECORD			
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	mm
36.6 –	24.4	FRE	–			
195.1 –	45.7	SUL	–			
–			–			
–			–			
–			–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / KELLY BUSHING	0.0		
	DRIFT / QUATERNARY	0.7		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT	39.6		
	HAMILTON	96.0		
	MARCELLUS			
	DUNDEE	158.5		
	COLUMBUS			
	LUCAS	193.5		
	AMHERSTBURG	246.9		
	SYLVANIA			
	BOIS BLANC	295.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	301.8		
	G SHALE	338.3		
	F SHALE	349.5		
	F SALT			
	E CARBONATE	390.2		
	[illegible]/EQUIVALENT	413.0		
	C SHALE	420.5		
	B MARKER	431.0		
	B EQUIVALENT	435.5		
	B SALT	442.0		
	B ANHYDRITE	504.5		
	A2 CARBONATE	506.0		
	A2 SALT	548.6		

SILURIAN	A2 ANHYDRITE	568.1	
	A1 CARBONATE	569.6	
	A1 SALT		
	A1 ANHYDRITE	600.4	
	GUELPH	603.0	
	ERAMOSA		
	GOAT ISLAND		
	GASPORT/WIARTON		
	DECEW		
	ROCHESTER		
	IRONDEQUOIT		
	REYNALES/FOSSIL HILL		
	THOROLD		
	GRIMSBY		
	CABOT HEAD		
	MANITOULIN		
	WHIRLPOOL		
ORDOVICIAN	QUEEN[illegible]		
	BLUE [illegible] GEORG. BAY		
	COLLING[illegible]OOD		
	COBOURG		
	VERULAM		
	KIRKFIELD		
	COBOCONK		
	GULL RIVER		
	SHADOW LAKE		
	CAMBRIAN		
	PRECAMBRIAN		

GEOLOGY BY: T.R. Carter

CTY	Lambton	TWP	Sombra	BLK	TRAC 6	LOT 8	CON VI
WELL NAME	Devran 2 Sombra 6-8-VI			PERMIT	7386	INIT CLASS	NPW
OPERATOR	Devran Petroleum			TARGET	ORD	CUR STATUS	DH-ABD

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	Charles Shaw Drilling			PERMIT	1988-08-30	NORTH	502.0	m	TOP	38.0
RIG TYPE	Cable	DEPTHS		SPUD	1988-08-31	SOUTH		m	BOT	1189.0
CABLE TOP	1.3	KB ELEV	179.8	COMPTD	1988-11-11	EAST	150.0	m	TRAY	9264-
BOT	1189.0	LOGGER	1195.0	OFFCNF	1989-11-11	WEST		m		65
ROTRY TOP		DRILLER	1189.0	WRKOVR		LAT	42 38 50			
BOT		DEEP END		ABNDND	1988-11-18	LONG	82 24 52.5			
DRLG FLD		PLUG BK								

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS	$10^3m^3/d$
–			339.7	71.4	42.1	SHO	42.1	OIL	m^3/d
–			273.1	60.3	159.7	SHO	159.7	SIP	kPa
–			219.1	35.7	358.8	PAC	331.9	FORM	
–			177.8	29.8	669.1	CEM	491.2	INTRVL	m
–									m
–									m

INITIAL OIL RECORD			LOGGING RECORD			PERF ☐	OPEN HOLE ☐
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	REMARKS	
–			0.0 – 1195.0	GRNL	CMPL		
–			890.0 – 1194.5	DENL	"		
–			–			A-2 Shale at 553.2	
–			–				
–			–				
–			–				

INITIAL WATER RECORD			CORING RECORD			
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	mm
38.0 –	NA	FRE	–			
190.0 –	30.0	SUL	–			
617.0 –	38.5	SAL	–			
637.0 –	180.0	SAL	–			
659.0 –	385.0	SAL	–			
–			–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / LAKE LEVEL	0.0		
	DRIFT / LAKE BOTTOM	1.3		
DEVONIAN	PORT LAMBTON	37.5		
	KETTLE POINT	54.3		
	HAMILTON	95.0		
	MARCELLUS			
	DUNDEE	158.3		
	COLUMBUS			
	LUCAS	185.0		
	AMHERSTBURG	241.0		
	SYLVANIA			
	BOIS BLANC	288.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	304.5		
	G SHALE	348.5		
	F SHALE	354.5		
	F SALT			
	E CARBONATE	398.0		
	[illegible]/EQUIVALENT	420.0		
	C SHALE	426.6		
	B MARKER	436.0		
	B EQUIVALENT	442.1		
	B SALT	449.0		
	B ANHYDRITE			
	A2 CARBONATE	522.5		
	A2 SALT	560.2		

SILURIAN	A2 ANHYDRITE	579.0	
	A1 CARBONATE	580.5	
	A1 SALT		
	A1 ANHYDRITE	608.9	
	GUELPH	613.2	
	ERAMOSA		
	GOAT ISLAND	622.3	
	GASPORT/WIARTON	636.5	
	DECEW		
	ROCHESTER	657.3	
	IRONDEQUOIT		
	REYNALES/FOSSIL HILL	665.0	
	THOROLD		
	GRIMSBY		
	CABOT HEAD	667.0	
	MANITOULIN	702.8	
	WHIRLPOOL		
ORDOVICIAN	QUEENSTON	715.4	
	BLUE MOUNTAIN - GEORG. BAY	791.0	
	COLLINGWOOD		
	COBOURG	899.4	
	VERULAM	944.5	
	KIRKFIELD	990.0	
	COBOCONK	1036.9	
	GULL RIVER	1073.0	
	SHADOW LAKE		
	CAMBRIAN	1186.3	
	PRECAMBRIAN	1187.9	

GEOLOGY BY: T.R. Carter

T.R. Carter

CTY Lambton TWP Sombra BLK TRAC 5 LOT 11 CON XII
WELL NAME Hadley-Midway Sombra 5-11-XII PERMIT 7243 INIT CLASS NPW
OPERATOR Midway Petroleum Company TARGET SAL CUR STATUS GP

DRILLING DATA		DATES		COORDINATES		SAMPLES	
CONTRACTOR	Rawlings Drilling Company	PERMIT	1988-02-26	NORTH m		TOP	48.8
RIG TYPE	Cable	SPUD	1988-05-11	SOUTH	771.2 m	BOT	672.4
CABLE TOP	1.1	COMPTD	1988-06-21	EAST m		TRAY	9246
BOT	672.4	OFFCNF	1989-06-21	WEST	158.5 m		
ROTRY TOP		WRKOVR		LAT	42 43 22.5		
BOT		ABNDND		LONG	82 23 00		
DRLG FLD							

DEPTHS: KB ELEV 186.2; LOGGER 672.4; DRILLER 672.4; DEEP END; PLUG BK 662.0

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
645.6 –	Show	NA
652.9 –	1.0	4136.9
656.8 –	1.1	NA
–		
–		
–		

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
42.1 –	NA	FRE
209.7 – 212.8	61.0	SUL
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
273	90.3	50.0	SHO	0
219	53.6	179.8	SHO	0
178	43.2	388.0	CEM	311.2
114	22.5	671.8	CEM	0

LOGGING RECORD

INTERVAL	TYPE	COMPANY
0.0 – 672.4	GRNL	CMPL
396.2 – 662.0	CBND	"
396.2 – 662.0	CMPL	"
535.2 – 670.6	DENL	"
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	###
–			
–			
–			
–			

COMPLETION DATA

GAS 12.2 $10^3 m^3/d$; OIL m^3/d; SIP 6570 kPa; FORM Guelph; INTRVL 645.0-645.6 m, 646.2-651.1 m, 654.1-655.9 m

PERF ☒ OPEN HOLE ☐

REMARKS: A-2 Shale at 582.5

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB ~~ELEVATION~~	0.0		
DRIFT ~~/CASING BOTTOM~~	1.1		
DEVONIAN: PORT LAMBTON			
DEVONIAN: KETTLE POINT	45.7		
DEVONIAN: HAMILTON	110.3		
DEVONIAN: MARCELLUS			
DEVONIAN: DUNDEE	177.1		
DEVONIAN: COLUMBUS			
DEVONIAN: LUCAS	210.5		
DEVONIAN: AMHERSTBURG	274.0		
DEVONIAN: SYLVANIA			
DEVONIAN: BOIS BLANC	311.0		
DEVONIAN: SPRINGVALE			
DEVONIAN: ORISKANY			
SILURIAN: BASS ISLANDS	335.0		
SILURIAN: G SHALE	372.5		
SILURIAN: F SHALE	379.5		
SILURIAN: F SALT			
SILURIAN: E CARBONATE	424.3		
SILURIAN: ~~E SALT~~/EQUIVALENT	446.8		
SILURIAN: C SHALE	453.5		
SILURIAN: B MARKER	464.8		
SILURIAN: B EQUIVALENT			
SILURIAN: B SALT	472.7		
SILURIAN: B ANHYDRITE			
SILURIAN: A2 CARBONATE	550.5		
SILURIAN: A2 SALT	588.9		

A2 ANHYDRITE			
A1 CARBONATE	607.5		
A1 SALT			
A1 ANHYDRITE	640.6		
GUELPH	644.7		
ERAMOSA			
GOAT ISLAND	656.5		
GASPORT/WIARTON			
DECEW			
ROCHESTER			
IRONDEQUOIT			
REYNALES/FOSSIL HILL			
THOROLD			
GRIMSBY			
CABOT HEAD			
MANITOULIN			
WHIRLPOOL			
QUEENSTON			
BLUE MOUNTAIN - GEORG BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Lambton TWP Sombra BLK TRAC 4 LOT 16 CON IX
WELL NAME Raen Smith et al Sombra 4-16-IX PERMIT 7316 INIT CLASS NPW
OPERATOR Raen Petroleum Corp. TARGET SAL CUR STATUS GP

DRILLING DATA		DATES		COORDINATES		SAMPLES	
CONTRACTOR	Ron Smith Well Drilling	PERMIT	1988-05-26	NORTH m		TOP	32.3
RIG TYPE	Cable	SPUD	1988-07-20	SOUTH	556.3 m	BOT	596.8
CABLE TOP	0.9	COMPTD	1988-10-12	EAST m		TRAY	9245
BOT	598.0	OFFCNF	1989-10-12	WEST	109.7 m		
ROTRY TOP		WRKOVR		LAT	42 41 08		
BOT		ABNDND		LONG	82 20 55		
DRLG FLD							

DEPTHS: KB ELEV 186.8; LOGGER; DRILLER 598.0; DEEP END; PLUG BK

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
592.0 – 593.0	2.83	
593.0 – 594.0	9.52	
595.0 – 596.0	14.39	
596.0 – 596.2	22.66	
596.2 – 598.0	23.37	
–		

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
32.0 –	9	FRE
195.0 –	46	SUL
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
273	59.5	33.5	SHO	0
219	35.7	164.6	SHO	164.6
178	29.7	359.7	CEM	0
140	20.8	590.7	CEM	0

LOGGING RECORD

INTERVAL	TYPE	COMPANY
213.4 – 579.0	CBND	CMPL
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	###
–			
–			
–			
–			
–			

COMPLETION DATA

GAS 23.37 $10^3 m^3/d$; OIL m^3/d; SIP 6481 kPa; FORM Guelph; INTRVL 591.8-598.0 m

PERF ☐ OPEN HOLE ☒

REMARKS: A-2 Shale at 548.3; Anhydrite with shaly limestone at 551.7

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB ~~ELEVATION~~	0.0		
DRIFT ~~/CASING BOTTOM~~	0.9		
DEVONIAN: PORT LAMBTON			
DEVONIAN: KETTLE POINT	32.3		
DEVONIAN: HAMILTON	96.3		
DEVONIAN: MARCELLUS			
DEVONIAN: DUNDEE	161.5		
DEVONIAN: COLUMBUS	185.9		
DEVONIAN: LUCAS	198.1		
DEVONIAN: AMHERSTBURG	259.1		
DEVONIAN: SYLVANIA			
DEVONIAN: BOIS BLANC	286.5		
DEVONIAN: SPRINGVALE	301.8		
DEVONIAN: ORISKANY			
SILURIAN: BASS ISLANDS	305.5		
SILURIAN: G SHALE	345.5		
SILURIAN: F SHALE	353.6		
SILURIAN: F SALT			
SILURIAN: E CARBONATE	395.0		
SILURIAN: ~~E SALT~~/EQUIVALENT	418.6		
SILURIAN: C SHALE	422.5		
SILURIAN: B MARKER			
SILURIAN: B EQUIVALENT			
SILURIAN: B SALT	445.0		
SILURIAN: B ANHYDRITE			
SILURIAN: A2 CARBONATE	508.6		
SILURIAN: A2 SALT	561.0		

A2 ANHYDRITE	566.9		
A1 CARBONATE	569.1		
A1 SALT			
A1 ANHYDRITE			
GUELPH	591.8		
ERAMOSA			
GOAT ISLAND			
GASPORT/WIARTON			
DECEW			
ROCHESTER			
IRONDEQUOIT			
REYNALES/FOSSIL HILL			
THOROLD			
GRIMSBY			
CABOT HEAD			
MANITOULIN			
WHIRLPOOL			
QUEENSTON			
BLUE MOUNTAIN - GEORG BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. CARTER

CTY Lambton TWP Sombra BLK TRAC LOT 24 CON X

WELL NAME Union Terminus 14 Sombra 24-X PERMIT 7139 INIT CLASS OBS

OPERATOR Union Gas Ltd TARGET SAL CUR STATUS OBS

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	C. Shaw Drilling Ltd			PERMIT	1987-04-24	NORTH	152.4	m	TOP	41
RIG TYPE	Cable	DEPTHS		SPUD	1987-12-03	SOUTH		m	BOT	590
CABLE TOP	1.2	KB ELEV	189.3	COMPTD	1988-01-26	EAST	106.7	m	TRAY	9238
BOT	590.0	LOGGER	588.7	OFFCNF	1988-02-25	WEST		m		
ROTRY TOP		DRILLER	590.0	WRKOVR		LAT	42 41 28			
BOT		DEEP END		ABNDND		LONG	82 47 39			
DRLG FLD		PLUG BK								

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
556.0 – 590.0	SHOW	1050.0
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
340	71.4	39.0	SHO	0
273	60.3	159.0	SHO	159.0
219	35.7	350.8	CEM	0
140	20.8	553.1	CEM	0

COMPLETION DATA

GAS	NA	$10^3 m^3/d$
OIL		m^3/d
SIP	1050	kPa
FORM	A-1 Carbonate	
INTRVL	556.0-590.0	m
		m
		m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
0.0 – 588.7	GRNL	CMPL
550.0 – 588.0	DENL	"
0.0 – 537.7	CBND	"
–		
–		
–		
–		

PERF ☐ OPEN HOLE ☒

REMARKS

A-2 Shale at 535.0

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
34.0 –	NA	FRE
186.0 –	40.0	SUL
555.0 – 590.0	NA	SAL
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			
–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB /~~ELEVATION~~	0.0		
	DRIFT /~~ELEVATION~~	1.2		
DEVONIAN	PORT LAMBTON			
DEVONIAN	KETTLE POINT	34.0		
DEVONIAN	HAMILTON	89.4		
DEVONIAN	MARCELLUS			
DEVONIAN	DUNDEE	155.0		
DEVONIAN	COLUMBUS			
DEVONIAN	LUCAS	181.0		
DEVONIAN	AMHERSTBURG	242.0		
DEVONIAN	SYLVANIA			
DEVONIAN	BOIS BLANC	281.0		
DEVONIAN	SPRINGVALE			
DEVONIAN	ORISKANY			
SILURIAN	BASS ISLANDS	297.0		
SILURIAN	G SHALE	335.8		
SILURIAN	F SHALE	342.5		
SILURIAN	F SALT			
SILURIAN	E CARBONATE	387.5		
SILURIAN	~~DOLOMITE~~/EQUIVALENT	409.2		
SILURIAN	C SHALE	415.1		
SILURIAN	B MARKER	425.6		
SILURIAN	B EQUIVALENT	432.1		
SILURIAN	B SALT	438.0		
SILURIAN	B ANHYDRITE			
SILURIAN	A2 CARBONATE	498.8		
SILURIAN	A2 SALT	543.3		
SILURIAN	A2 ANHYDRITE	551.5		
SILURIAN	A1 CARBONATE	553.0		
SILURIAN	A1 SALT			
SILURIAN	A1 ANHYDRITE			
SILURIAN	GUELPH			
SILURIAN	ERAMOSA			
SILURIAN	GOAT ISLAND			
SILURIAN	GASPORT/WARTON			
SILURIAN	DECEW			
SILURIAN	ROCHESTER			
SILURIAN	IRONDEQUOIT			
SILURIAN	REYNALES/FOSSIL HILL			
SILURIAN	THOROLD			
SILURIAN	GRIMSBY			
SILURIAN	CABOT HEAD			
SILURIAN	MANITOULIN			
ORDOVICIAN	WHIRLPOOL			
ORDOVICIAN	QUEENSTON			
ORDOVICIAN	BLUE MOUNTAIN - GEORG BAY			
ORDOVICIAN	COLLINGWOOD			
ORDOVICIAN	COBOURG			
ORDOVICIAN	VERULAM			
ORDOVICIAN	KIRKFIELD			
ORDOVICIAN	COBOCONK			
ORDOVICIAN	GULL RIVER			
ORDOVICIAN	SHADOW LAKE			
	CAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Lambton TWP Sombra BLK TRAC LOT 25 CON XI

WELL NAME Hadley-Midway Sombra 2-25-XI PERMIT 7205 INIT CLASS NFW

OPERATOR Midway Petroleum Company TARGET SAL CUR STATUS DH-ABD

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	Rawlings Drilling Company			PERMIT	1987-11-27	NORTH		m	TOP	35.1
RIG TYPE	Cable	DEPTHS		SPUD	1987-12-10	SOUTH	126.0	m	BOT	652.3
CABLE TOP	1.3	KB ELEV	190.5	COMPTD	1988-01-28	EAST		m	TRAY	9204
BOT	652.3	LOGGER	652.3	OFFCNF	1989-01-28	WEST	306.1	m		
ROTRY TOP		DRILLER	652.3	WRKOVR		LAT	42 42 45			
BOT		DEEP END		ABNDND	1988-02-05	LONG	82 17 01			
DRLG FLD		PLUG BK								

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
274	60.3	35.1	SHO	ALL
220	35.7	153.9	SHO	ALL
178	29.8	358.7	CEM	257.3

COMPLETION DATA

GAS		$10^3 m^3/d$
OIL		m^3/d
SIP		kPa
FORM		
INTRVL		m
		m
		m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
0.0 – 652.3	GRNL	CMPL
0.0 – 652.3	DENL	CMPL
–		
–		
–		
–		
–		

PERF ☐ OPEN HOLE ☐

REMARKS

A-2 Shale at 547.4

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
34.1 –	NA	FRE
181.4 –	51.8	SUL
634.0 –	525.2	SAL
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			
–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB /~~ELEVATION~~	0.0		
	DRIFT /~~ELEVATION~~	1.3		
DEVONIAN	PORT LAMBTON			
DEVONIAN	KETTLE POINT	34.7		
DEVONIAN	HAMILTON	86.6		
DEVONIAN	MARCELLUS			
DEVONIAN	DUNDEE	151.5		
DEVONIAN	COLUMBUS			
DEVONIAN	LUCAS	179.8		
DEVONIAN	AMHERSTBURG	244.0		
DEVONIAN	SYLVANIA			
DEVONIAN	BOIS BLANC	288.5		
DEVONIAN	SPRINGVALE			
DEVONIAN	ORISKANY			
SILURIAN	BASS ISLANDS	302.0		
SILURIAN	G SHALE	338.9		
SILURIAN	F SHALE	345.6		
SILURIAN	F SALT			
SILURIAN	E CARBONATE	389.2		
SILURIAN	~~DOLOMITE~~/EQUIVALENT	411.8		
SILURIAN	C SHALE	416.7		
SILURIAN	B MARKER	431.6		
SILURIAN	B EQUIVALENT			
SILURIAN	B SALT	440.1		
SILURIAN	B ANHYDRITE			
SILURIAN	A2 CARBONATE	513.0		
SILURIAN	A2 SALT	555.7		
SILURIAN	A2 ANHYDRITE			
SILURIAN	A1 CARBONATE	574.2		
SILURIAN	A1 SALT			
SILURIAN	A1 ANHYDRITE	611.4		
SILURIAN	GUELPH	617.8		
SILURIAN	ERAMOSA			
SILURIAN	GOAT ISLAND	624.2		
SILURIAN	GASPORT/WARTON	632.5		
SILURIAN	DECEW			
SILURIAN	ROCHESTER			
SILURIAN	IRONDEQUOIT			
SILURIAN	REYNALES/FOSSIL HILL			
SILURIAN	THOROLD			
SILURIAN	GRIMSBY			
SILURIAN	CABOT HEAD			
SILURIAN	MANITOULIN			
ORDOVICIAN	WHIRLPOOL			
ORDOVICIAN	QUEENSTON			
ORDOVICIAN	BLUE MOUNTAIN - GEORG BAY			
ORDOVICIAN	COLLINGWOOD			
ORDOVICIAN	COBOURG			
ORDOVICIAN	VERULAM			
ORDOVICIAN	KIRKFIELD			
ORDOVICIAN	COBOCONK			
ORDOVICIAN	GULL RIVER			
ORDOVICIAN	SHADOW LAKE			
	CAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

T.R. Carter

CTY Lambton TWP Sombra BLK TRAC 6 LOT 27 CON XII

WELL NAME Brightwest Sombra 6-27-XII PERMIT 7258 INIT CLASS NPW

OPERATOR Brightwest Resource Explorations Inc. TARGET SAL CUR STATUS DH-ABD

DRILLING DATA

CONTRACTOR Charles Shaw Drilling Ltd
RIG TYPE Cable DEPTHS
CABLE TOP 1.2 KB ELEV 190.0
BOT 656.0 LOGGER 655.5
ROTRY TOP DRILLER 656.0
BOT DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-03-24
SPUD 1988-04-14
COMPTD 1988-05-18
OFFCNF 1989-05-18
WRKOVR
ABNDND 1988-05-20

COORDINATES

NORTH 350.0 m
SOUTH m
EAST 115.0 m
WEST m
LAT 42 43 01
LONG 82 16 14

SAMPLES

TOP 30.0
BOT 656.0
TRAY 9194

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
274	60.3	33.1	SHO	33.1
220	35.7	151.2	SHO	151.2
178	29.8	361.8	CEM	277.6

COMPLETION DATA

GAS $10^3 m^3/d$
OIL m^3/d
SIP kPa
FORM
INTRVL m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
0.0 – 655.0	GRNL	SCH
500.0 – 655.0	DENL	"
–		
–		
–		
–		
–		

PERF ☐ OPEN HOLE ☐

REMARKS

A-? Shale at 546.1

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
32.0 – 13.0	13.0	FRE
178.0 – 40.0	40.0	SUL
614.0 – 617.0	555.0	SAL
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	MM
–			
–			
–			
–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB /LAKE LEVEL	0.0		
	DRIFT / LAKE BOTTOM	1.2		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT	31.0		
	HAMILTON	83.0		
	MARCELLUS			
	DUNDEE	149.0		
	COLUMBUS			
	LUCAS	175.0		
	AMHERSTBURG	226.0		
	SYLVANIA			
	BOIS BLANC	282.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	292.5		
	G SHALE	338.8		
	F SHALE	345.3		
	F SALT			
	E CARBONATE	388.1		
	D SALT/EQUIVALENT	410.3		
	C SHALE	414.3		
	B MARKER	430.0		
	B EQUIVALENT			
	B SALT	436.0		
	B ANHYDRITE			
	A2 CARBONATE	511.5		
	A2 SALT	554.0		
	A2 ANHYDRITE			
	A1 CARBONATE	571.2		
	A1 SALT			
	A1 ANHYDRITE	609.8		
	GUELPH	613.0		
	ERAMOSA			
	GOAT ISLAND	621.2		
	GASPORT/MARTON	630.5		
	DECEW			
	ROCHESTER	649.6		
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL			
	THOROLD			
	GRIMSBY			
	CABOT HEAD			
	MANITOULIN			
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON			
	BLUE MOUNTAIN - GEORG BAY			
	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
CAMBRIAN				
PRECAMBRIAN				

GEOLOGY BY: T.R. Carter

CTY Lambton TWP Sombra BLK TRAC 7 LOT 27 CON XIV

WELL NAME Hadley-Midway Sombra 7-27-XIV PERMIT 7326A INIT CLASS NPW

OPERATOR Midway Petroleum Co. TARGET SAL CUR STATUS GS-ABD

DRILLING DATA

CONTRACTOR Rawlings Drilling Co.
RIG TYPE Cable DEPTHS
CABLE TOP 1.2 KB ELEV 189.5
BOT 668.7 LOGGER
ROTRY TOP DRILLER 668.7
BOT DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-06-10
SPUD 1988-09-19
COMPTD 1988-10-27
OFFCNF 1989-10-27
WRKOVR
ABNDND 1988-10-27

COORDINATES

NORTH 226.2 m
SOUTH m
EAST 131.0 m
WEST m
LAT 42 44 27
LONG 82 16 09.5

SAMPLES

TOP 32.3
BOT 668.7
TRAY 9290-
91

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
31.3 –	Show	NA
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
273	60.3	32.3	SHO	32.3
219	35.7	149.4	SHO	149.4
177	29.8	367.9	CEM	267.9

COMPLETION DATA

GAS $10^3 m^3/d$
OIL m^3/d
SIP kPa
FORM
INTRVL m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
28.3 –	15.2	FRE
158.5 – 161.5	45.7	SUL
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
0.0 – 666.9	GRNL	CMPL
516.9 – 666.9	DENL	"
–		
–		
–		
–		
–		

PERF ☐ OPEN HOLE ☐

REMARKS

A-2 Shale at 555.3

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	MM
–			
–			
–			
–			
–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB /LAKE LEVEL	0.0		
	DRIFT /LAKE BOTTOM	1.2		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT	31.1		
	HAMILTON	75.0		
	MARCELLUS			
	DUNDEE	145.1		
	COLUMBUS			
	LUCAS	173.1		
	AMHERSTBURG	233.5		
	SYLVANIA			
	BOIS BLANC	294.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	306.5		
	G SHALE	344.7		
	F SHALE	351.4		
	F SALT			
	E CARBONATE	394.7		
	D SALT/EQUIVALENT			
	C SHALE	421.8		
	B MARKER	439.2		
	B EQUIVALENT			
	B SALT	446.5		
	B ANHYDRITE			
	A2 CARBONATE	521.8		
	A2 SALT	563.3		
	A2 ANHYDRITE			
	A1 CARBONATE	586.4		
	A1 SALT			
	A1 ANHYDRITE	625.4		
	GUELPH	631.2		
	ERAMOSA			
	GOAT ISLAND	637.0		
	GASPORT/MARTON	645.3		
	DECEW			
	ROCHESTER	662.3		
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL			
	THOROLD			
	GRIMSBY			
	CABOT HEAD			
	MANITOULIN			
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON			
	BLUE MOUNTAIN - GEORG BAY			
	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
CAMBRIAN				
PRECAMBRIAN				

GEOLOGY BY: T.R. Carter

CTY Lambton TWP Sombra BLK TRAC 7 LOT 27 CON XIV

WELL NAME Hadley-Midway Sombra 7-27-XIV PERMIT 7326 INIT CLASS NPW

OPERATOR Midway Petroleum Co. TARGET SAL CUR STATUS LHGS-ABD

DRILLING DATA

CONTRACTOR Rawlings Drilling Co.
RIG TYPE Cable DEPTHS
CABLE TOP 1.2 KB ELEV 189.5
BOT 231.6 LOGGER
ROTRY TOP DRILLER 231.6
BOT DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-06-10
SPUD 1988-08-10
COMPTD 1988-09-15
OFFCNF 1989-09-15
WRKOVR
ABNDND 1988-09-15

COORDINATES

NORTH 226.2 m
SOUTH m
EAST 128.0 m
WEST m
LAT 42 44 27
LONG 82 16 09.5

SAMPLES

TOP 32.0
BOT 231.6
TRAY 9291

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
31.1 –	Show	NA
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
273	60.3	32.0	SHO	32.0
219	35.7	149.4	SHO	149.4

COMPLETION DATA

GAS 10³m³/d
OIL m³/d
SIP kPa
FORM
INTRVL m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
–		
–		
–		
–		
–		

PERF ☐ OPEN HOLE ☐

REMARKS

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
28.3 – 31.1	18.3	FRE
158.5 – 163.1	45.7	SUL
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			

GEOLOGICAL CONTACTS

		TOP	ELEV	THICK
	KB / ~~LAKE SURFACE~~	0.0		
	DRIFT / ~~LAKE BOTTOM~~	1.2		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT	31.1		
	HAMILTON	74.7		
	MARCELLUS			
	DUNDEE	145.1		
	COLUMBUS			
	LUCAS	165.5		
	AMHERSTBURG			
	SYLVANIA			
	BOIS BLANC			
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS			
	G SHALE			
	F SHALE			
	F SALT			
	E CARBONATE			
	D SALT/EQUIVALENT			
	C SHALE			
	B MARKER			
	B EQUIVALENT			
	B SALT			
	B ANHYDRITE			
	A2 CARBONATE			
	A2 SALT			
SILURIAN	A2 ANHYDRITE			
	A1 CARBONATE			
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH			
	ERAMOSA			
	GOAT ISLAND			
	GASPORT/WIARTON			
	DECEW			
	ROCHESTER			
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL			
	THOROLD			
	GRIMSBY			
	CABOT HEAD			
	MANITOULIN			
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON			
	BLUE MOUNTAIN - GEORG BAY			
	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
	CAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Lambton TWP Warwick BLK TRAC 3-2 LOT 26 CON VI SER

WELL NAME Chatham Res 6 Warwick 3-2-26-VI SER PERMIT 7232 INIT CLASS BD

OPERATOR Chatham Resources Ltd TARGET DEV CUR STATUS OS-CS-BD

DRILLING DATA

CONTRACTOR Eagle Drilling Services
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 246.6
BOT LOGGER
ROTRY TOP 0.9 DRILLER 247.0
BOT 247.0 DEEP END
DRLG FLD 247 PLUG BK

DATES

PERMIT 1988-02-01
SPUD 1988-01-27
COMPTD 1988-01-28
OFFCNF 1988-02-27
WRKOVR
ABNDND

COORDINATES

NORTH 1087.9 m
SOUTH m
EAST 76.2 m
WEST m
LAT 42 56 28
LONG 81 49 34

SAMPLES

TOP 48.2
BOT 246.9
TRAY 7114

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
130.5 –		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
177.8	25.3	47.0	CEM	0
114	14.1	141.7	CEM+BHP	0
60		140.2	CEM	0

COMPLETION DATA

GAS 10³m³/d
OIL m³/d
SIP kPa
FORM
INTRVL m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
130.5 –		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
0.0 – 134	GRL	CHPI.
0.0 – 134	NEUT	"
91.4 – 134	DENL	"
–		
–		
–		

PERF ☐ OPEN HOLE ☐

REMARKS

* Under Permit #7083: Deepened to 234.7m. Oct.14 to Nov.6, 1987. Deepened to 247m on Jan. 28, 1988 and completed as brine dis. under Permit #7232.

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
99.1 –		FRE
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			

GEOLOGICAL CONTACTS

		TOP	ELEV	THICK
	KB / ~~LAKE SURFACE~~	0.0		
	DRIFT / ~~LAKE BOTTOM~~	0.9		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT	35.1		
	HAMILTON	36.6		
	MARCELLUS			
	DUNDEE	114.0		
	COLUMBUS			
	LUCAS			
	AMHERSTBURG			
	SYLVANIA			
	BOIS BLANC			
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS			
	G SHALE			
	F SHALE			
	F SALT			
	E CARBONATE			
	D SALT/EQUIVALENT			
	C SHALE			
	B MARKER			
	B EQUIVALENT			
	B SALT			
	B ANHYDRITE			
	A2 CARBONATE			
	A2 SALT			
SILURIAN	A2 ANHYDRITE			
	A1 CARBONATE			
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH			
	ERAMOSA			
	GOAT ISLAND			
	GASPORT/WIARTON			
	DECEW			
	ROCHESTER			
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL			
	THOROLD			
	GRIMSBY			
	CABOT HEAD			
	MANITOULIN			
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON			
	BLUE MOUNTAIN - GEORG BAY			
	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
	CAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

T.R. Carter

CTY Middlesex TWP Ekfrid BLK TRAC 4 LOT 15 CON R IV S
WELL NAME Cons. P.D. 34368 PERMIT 7234 INIT CLASS NPW
OPERATOR Consumers Gas Co. Ltd TARGET CAM CUR STATUS DH-ABD

DRILLING DATA

CONTRACTOR	Underwater Gas Developers Ltd		
RIG TYPE	Rotary	DEPTHS	
CABLE TOP		KB ELEV	202.7
BOT		LOGGER	1139.5
ROTRY TOP	4.7	DRILLER	1140.0
BOT	1140.0	DEEP END	
DRLG FLD		PLUG BK	

DATES

PERMIT	1988-02-05
SPUD	1988-02-11
COMPTD	1988-02-19
OFFCNF	1989-02-19
WRKOVR	
ABNDND	1988-02-20

COORDINATES

NORTH		m
SOUTH	549.3	m
EAST		m
WEST	120.0	m
LAT	42 43 47	
LONG	81 35 08	

SAMPLES

TOP	9.0
BOT	1140.0
TRAY	9491-92

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244	54.0	79.7	CEM	0
178	29.8	515.2	CEM	0

COMPLETION DATA

GAS	$10^3m^3/d$
OIL	m^3/d
SIP	kPa
FORM	
INTRVL	m
	m
	m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
15.0 – 1138.6	GRNL	SCH
15.0 – 1138.6	LDT	"
15.0 – 1138.6	PEF	"
3.0 – 1136.0	SONL	"
–		
–		
–		

PERF ☐ OPEN HOLE ☐

REMARKS

A-2 Shale at 406.1

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
109.0 –	NA	SUL
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS

		TOP	ELEV	THICK
	KB [illegible]	0.0		
	DRIFT [illegible]	4.7		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON	53.0		
	MARCELLUS			
	DUNDEE	89.5		
	COLUMBUS	120.0		
	LUCAS	121.3		
	AMHERSTBURG	144.0		
	SYLVANIA			
	BOIS BLANC	185.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	229.5		
	G SHALE	279.6		
	F SHALE	288.0		
	F SALT			
	E CARBONATE	332.7		
	D SALT/EQUIVALENT			
	C SHALE	359.1		
	B MARKER	369.7		
	B EQUIVALENT	375.8		
	B SALT			
	B ANHYDRITE			
	A2 CARBONATE	386.9		
	A2 SALT			

SILURIAN	A2 ANHYDRITE	412.6		
	A1 CARBONATE	415.2		
	A1 SALT			
	A1 ANHYDRITE	433.2		
	GUELPH	435.3		
	ERAMOSA			
	GOAT ISLAND	454.2		
	GASPORT/WIARTON	490.0		
	DECEW			
	ROCHESTER	496.1		
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL	512.0		
	THOROLD			
	GRIMSBY			
	CABOT HEAD	513.0		
	MANITOULIN	542.6		
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON	551.4		
	BLUE MOUNTAIN - GEORG BAY	685.8		
	COLLINGWOOD			
	COBOURG	848.0		
	VERULAM	878.3		
	KIRKFIELD	945.3		
	COBOCONK	993.0		
	GULL RIVER	1018.5		
	SHADOW LAKE	1107.7		
CAMBRIAN		1109.0		
PRECAMBRIAN		1118.0		

GEOLOGY BY: T.R. Carter

CTY Middlesex TWP McGillivray BLK TRAC 1 LOT 9 CON XV
WELL NAME Canex 882 McGillivray 1-9-XV PERMIT 7400 INIT CLASS NPW
OPERATOR Canex Petroleum Inc. TARGET SAL CUR STATUS GS-ABD

DRILLING DATA

CONTRACTOR	Underwater Gas Developers		
RIG TYPE	Rotary	DEPTHS	
CABLE TOP		KB ELEV	240.6
BOT		LOGGER	512.3
ROTRY TOP	4.8	DRILLER	513.0
BOT	513.0	DEEP END	
DRLG FLD		PLUG BK	

DATES

PERMIT	1988-09-16
SPUD	1988-10-27
COMPTD	1988-11-03
OFFCNF	1989-11-03
WRKOVR	
ABNDND	1988-12-20

COORDINATES

NORTH		m
SOUTH	102.0	m
EAST		m
WEST	250.0	m
LAT	43 13 34.5	
LONG	81 35 17	

SAMPLES

TOP	0.0
BOT	513.0
TRAY	6621

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
423.0 – 429.0	Show	NA
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244	53.6	47.7	CEM	0
178	29.8	282.0	CEM	126.0

COMPLETION DATA

GAS	$10^3m^3/d$
OIL	m^3/d
SIP	kPa
FORM	
INTRVL	m
	m
	m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
281.0 – 508.0	DLL	SCH
281.0 – 500.0	SONL	"
–		
–		
–		
–		

PERF ☐ OPEN HOLE ☐

REMARKS

A-2 Shale at 417.9
Pinnacle Reef

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
119.0 –	NA	SUL
437.0 – 508.0	NA	SAL
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS

		TOP	ELEV	THICK
	KB [illegible]	0.0		
	DRIFT [illegible]	4.8		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON	41.0		
	MARCELLUS			
	DUNDEE	72.0		
	COLUMBUS			
	LUCAS	101.0		
	AMHERSTBURG	195.0		
	SYLVANIA			
	BOIS BLANC			
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	234.0		
	G SHALE	288.0		
	F SHALE	294.9		
	F SALT			
	E CARBONATE	335.2		
	D SALT/EQUIVALENT			
	C SHALE	357.0		
	B MARKER	363.7		
	B EQUIVALENT	369.1		
	B SALT			
	B ANHYDRITE			
	A2 CARBONATE	399.0		
	A2 SALT			

SILURIAN	A2 ANHYDRITE	420.0		
	A1 CARBONATE			
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH	423.0		
	ERAMOSA			
	GOAT ISLAND			
	GASPORT/WIARTON			
	DECEW			
	ROCHESTER			
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL			
	THOROLD			
	GRIMSBY			
	CABOT HEAD			
	MANITOULIN			
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON			
	BLUE MOUNTAIN - GEORG BAY			
	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
CAMBRIAN				
PRECAMBRIAN				

GEOLOGY BY: T.R. Carter

CTY Middlesex TWP North Dorchester BLK TRAC 7 LOT 19 CON IV STR

WELL NAME Devran 1 N. Dorchester 7-19-IV STR PERMIT 7223 INIT CLASS NPW

OPERATOR Devran Petroleum Ltd TARGET CAM CUR STATUS DH-ABD

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	Charles Shaw Drilling Co. Ltd			PERMIT	1988-01-07	NORTH	199.5	m	TOP	88.0
RIG TYPE	Cable	DEPTHS		SPUD	1988-01-13	SOUTH		m	BOT	1083.0
CABLE TOP	1.2	KB ELEV	294.0	COMPTD	1988-03-21	EAST	151.0	m	TRAY	9487-
BOT	1083.0	LOGGER	1081.6	OFFCNF	1989-03-21	WEST		m		88
ROTRY TOP		DRILLER	1083.0	WRKOVR		LAT	42 54 59			
BOT		DEEP END		ABNDND	1988-03-28	LONG	81 03 24			
DRLG FLD		PLUG BK								

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS	$10^3 m^3/d$
–			339.7	71.4	76.2	SHO	0	OIL	m^3/d
–			273.1	60.3	87.4	SHO	77.8	SIP	kPa
–			219.1	35.7	236.4	CEM	146.3	FORM	
–								INTVL	m
–									m
–									m

INITIAL OIL RECORD			LOGGING RECORD				COMPLETION DATA
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	PERF ☐	OPEN HOLE ☐
–			0.0 – 1081.6	GRNL	CMPL		REMARKS
–			815.0 – 1081.6	DENL	"		
–			–				
–			–				
–			–				
–			–				

INITIAL WATER RECORD			CORING RECORD			
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	mm
78.0 –	31.0	FRE	–			
91.0 –	46.0	FRE	–			
–			–			
–			–			
–			–			
–			–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / LUKE MBR.	0.0		
	DRIFT / LUKE MBR.	1.2		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON			
	MARCELLUS			
	DUNDEE	86.5		
	COLUMBUS	88.0		
	LUCAS	92.0		
	AMHERSTBURG	125.0		
	SYLVANIA			
	BOIS BLANC	189.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	210.0		
	G SHALE	226.2		
	F SHALE	231.9		
	F SALT			
	E CARBONATE	274.0		
	D SALT/EQUIVALENT			
	C SHALE	298.1		
	B MARKER	305.0		
	B EQUIVALENT	311.0		
	B SALT			
	B ANHYDRITE			
	A2 CARBONATE	322.1		
	A2 SALT			
	A2 ANHYDRITE	346.0		
	A1 CARBONATE	347.0		
	A1 SALT			
	A1 ANHYDRITE			
SILURIAN	GUELPH	352.0		
	ERAMOSA			
	GOAT ISLAND	363.5		
	GASPORT/MARTON	419.1		
	DECEW			
	ROCHESTER	426.P		
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL	441.0		
	THOROLD			
	GRIMSBY			
	CABOT HEAD	445.9		
	MANITOULIN	469.0		
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON	477.0		
	BLUE MOUNTAIN - GEORG BAY	635.0		
	COLLINGWOOD			
	COBOURG	822.8		
	VERULAM	857.8		
	KIRKFIELD	932.0		
	COBOCONK	968.4		
	GULL RIVER	990.3		
	SHADOW LAKE	1062.8		
	CAMBRIAN	1064.0		
	PRECAMBRIAN	1066.0		

GEOLOGY BY: T.R. Carter

CTY Norfolk TWP Charlotteville BLK TRAC 7 LOT 20 CON III

WELL NAME Metalore 76 Charlotteville 7-20-III PERMIT 7305 INIT CLASS NPW

OPERATOR Metalore Resources Ltd TARGET CLI CUR STATUS GP

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	Elgin Mitchell			PERMIT	1988-05-13	NORTH	108.6	m	TOP	73.2
RIG TYPE	Rotary	DEPTHS		SPUD	1988-05-23	SOUTH		m	BOT	403.6
CABLE TOP		KB ELEV	225.4	COMPTD	1988-08-13	EAST	209.7	m	TRAY	7022
BOT		LOGGER		OFFCNF	1988-09-12	WEST		m		
ROTRY TOP	1.0	DRILLER	403.6	WRKOVR		LAT	42 45 03.5			
BOT	403.6	DEEP END		ABNDND		LONG	80 18 39.5			
DRLG FLD		PLUG BK	377.9							

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS 0.4	$10^3 m^3/d$
367.0 – 367.3	0.06	3792	219	35.7	73.2	CEM	0	OIL	m^3/d
367.3 – 367.6	0.20	3792	114	14.1	367.0	CEM	0	SIP 3792	kPa
367.6 – 368.5	0.10	3792	19	NA	377.9	HAN	0	FORM Thorold, Grimsby	
369.7 – 370.3	0.03	3792						INTVL 367.0-371.2	m
370.9 – 371.2	0.01	3792							m
–									m

INITIAL OIL RECORD			LOGGING RECORD			COMPLETION DATA
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	PERF ☐ OPEN HOLE ☒
–			–			REMARKS
–			–			
–			–			Some samples are
–			–			mixed up.
–			–			
–			–			

INITIAL WATER RECORD			CORING RECORD			
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	mm
–			–			
–			–			
–			–			
–			–			
–			–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / RKB LEVEL	0.0		
	DRIFT / KIMBERLEY MBR.	1.0		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON			
	MARCELLUS			
	DUNDEE	68.6		
	COLUMBUS			
	LUCAS			
	AMHERSTBURG	115.0		
	SYLVANIA			
	BOIS BLANC	128.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	161.0		
	G SHALE			
	F SHALE	174.0		
	F SALT			
	E CARBONATE	215.0		
	D SALT/EQUIVALENT			
	C SHALE	238.5		
	B MARKER	254.0		
	B EQUIVALENT	261.5		
	B SALT			
	B ANHYDRITE			
	A2 CARBONATE	266.0		
	A2 SALT			
	A2 ANHYDRITE			
	A1 CARBONATE	273.8		
	A1 SALT			
	A1 ANHYDRITE			
SILURIAN	QUEENSTON	280.4		
	ERAMOSA			
	GOAT ISLAND			
	GASPORT/MARTON			
	DECEW	344.4		
	ROCHESTER	353.0		
	IRONDEQUOIT	363.0		
	REYNALES/FOSSIL HILL	364.2		
	THOROLD	366.4		
	GRIMSBY	368.8		
	CABOT HEAD			
	MANITOULIN	398.7		
	WHIRLPOOL	401.4		
ORDOVICIAN	QUEENSTON	402.5		
	BLUE MOUNTAIN - GEORG BAY			
	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
	CAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

T.R. Carter

CTY	Norfolk	TWP	Houghton	BLK		TRAC	8	LOT	4	CON	II
WELL NAME	Hemlock 12 Houghton 8-4-II				PERMIT	7260		INIT CLASS		NPW	
OPERATOR	Hemlock Explorations Ltd				TARGET	CLI		CUR STATUS		GP	

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	Murray Rose Drilling			PERMIT	1988-04-07	NORTH	73.3	m	TOP	256.3
RIG TYPE	Cable	DEPTHS		SPUD	1988-05-26	SOUTH		m	BOT	449.6
CABLE TOP	1.0	KB ELEV	205.5	COMPTD	1988-08-23	EAST	112.8	m	TRAY	9144
BOT	449.6	LOGGER		OFFCNF	1989-08-23	WEST		m		
ROTRY TOP		DRILLER	449.6	WRKOVR		LAT	42 38 36			
BOT		DEEP END		ABNDND		LONG	80 40 27			
DRLG FLD		PLUG BK	435.9							

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
434.0 –	1.0	NA
434.6 –	1.3	4412.6
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
273	60.3	94.2	SHO	6.1
219	47.6	109.4	BAR	0
114	14.1	434.0	CEM	0

COMPLETION DATA

GAS	1.3	$10^3 m^3/d$
OIL		m^3/d
SIP	4688.4	kPa
FORM	Thorold, Grimsby	
INTRVL	434.0-435.9	m
		m
		m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
–		
–		
–		
–		
–		
–		

PERF ☐ OPEN HOLE ☒

REMARKS

No samples above 256.3.
Operator tops only

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
109.7 –	30.5	SUL
187.5 –	27.4	SUL
344.4 –	12.2	SUL
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			
–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / [illegible]	0.0		
	DRIFT / [illegible]	1.0		
DEVONIAN	PORT LAMBTON			
DEVONIAN	KETTLE POINT			
DEVONIAN	HAMILTON			
DEVONIAN	MARCELLUS	94.2		
DEVONIAN	DUNDEE	105.8		
DEVONIAN	COLUMBUS			
DEVONIAN	LUCAS			
DEVONIAN	AMHERSTBURG			
DEVONIAN	SYLVANIA			
DEVONIAN	BOIS BLANC	165.2		
DEVONIAN	SPRINGVALE			
DEVONIAN	ORISKANY			
SILURIAN	BASS ISLANDS	202.7		
SILURIAN	G SHALE	222.8		
SILURIAN	F SHALE			
SILURIAN	F SALT			
SILURIAN	E CARBONATE	267.5		
SILURIAN	D SALT/EQUIVALENT			
SILURIAN	C SHALE	285.0		
SILURIAN	B MARKER	301.0		
SILURIAN	B EQUIVALENT	306.0		
SILURIAN	B SALT			
SILURIAN	B ANHYDRITE			
SILURIAN	A2 CARBONATE	315.5		
SILURIAN	A2 SALT			
SILURIAN	A2 ANHYDRITE			
SILURIAN	A1 CARBONATE	327.0		
SILURIAN	A1 SALT			
SILURIAN	A1 ANHYDRITE			
SILURIAN	GUELPH	337.7		
SILURIAN	ERAMOSA			
SILURIAN	GOAT ISLAND			
SILURIAN	GASPORT/WARTON			
SILURIAN	DECEW	408.0		
SILURIAN	ROCHESTER	412.6		
SILURIAN	IRONDEQUOIT	428.9		
SILURIAN	REYNALES/FOSSIL HILL	431.0		
SILURIAN	THOROLD	433.1		
SILURIAN	GRIMSBY	435.6		
SILURIAN	CABOT HEAD	446.3		
SILURIAN	MANITOULIN			
SILURIAN	WHIRLPOOL			
ORDOVICIAN	QUEENSTON			
ORDOVICIAN	BLUE MOUNTAIN - GEORG. BAY			
ORDOVICIAN	COLLINGWOOD			
ORDOVICIAN	COBOURG			
ORDOVICIAN	VERULAM			
ORDOVICIAN	KIRKFIELD			
ORDOVICIAN	COBOCONK			
ORDOVICIAN	GULL RIVER			
ORDOVICIAN	SHADOW LAKE			
CAMBRIAN	CAMBRIAN			
PRECAMBRIAN	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY	Norfolk	TWP	Lake Erie	BLK	65	TRAC	V	LOT		CON	
WELL NAME	Pembina 3 Lake Erie 65-V				PERMIT	7348		INIT CLASS		NPW	
OPERATOR	Pembina Exploration Ltd				TARGET	CLI		CUR STATUS		DH-ABD	

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	Pembina Resources Ltd			PERMIT	1988-07-11	NORTH		m	TOP	112.0
RIG TYPE	Rotary	DEPTHS		SPUD	1988-08-08	SOUTH		m	BOT	456.0
CABLE TOP		KB ELEV	180.4	COMPTD	1988-08-11	EAST		m	TRAY	7623
BOT		LOGGER	457.7	OFFCNF	1989-08-11	WEST		m		
ROTRY TOP	48.0	DRILLER	459.0	WRKOVR		LAT	42 35 10.7			
BOT	459.0	DEEP END		ABNDND	1988-08-11	LONG	80 01 45.3			
DRLG FLD		PLUG BK								

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
244	53.6	109.3	CEM	0
178	25.3	200.7	CEM	0

COMPLETION DATA

GAS		$10^3 m^3/d$
OIL		m^3/d
SIP		kPa
FORM		
INTRVL		m
		m
		m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
37.6 – 457.2	GRNL	CMPL
37.6 – 457.2	DENL	"
200.6 – 457.7	DIL	"
37.6 – 457.7	CMPL	"
–		
–		
–		

PERF ☐ OPEN HOLE ☐

REMARKS

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			
–			

	GEOLOGICAL CONTACTS	TOP	ELEV	THICK
	KB / LAKE LEVEL	6.0		
	DRIFT / LAKE BOTTOM	48.0		
DEVONIAN	PORT LAMBTON			
DEVONIAN	KETTLE POINT			
DEVONIAN	HAMILTON			
DEVONIAN	MARCELLUS			
DEVONIAN	DUNDEE	98.6		
DEVONIAN	COLUMBUS			
DEVONIAN	LUCAS			
DEVONIAN	AMHERSTBURG	122.5		
DEVONIAN	SYLVANIA			
DEVONIAN	BOIS BLANC	146.0		
DEVONIAN	SPRINGVALE			
DEVONIAN	ORISKANY			
SILURIAN	BASS ISLANDS	164.5		
SILURIAN	G SHALE	185.7		
SILURIAN	F SHALE	191.8		
SILURIAN	F SALT			
SILURIAN	E CARBONATE	227.7		
SILURIAN	D SALT/EQUIVALENT			
SILURIAN	C SHALE	250.3		
SILURIAN	B MARKER	257.8		
SILURIAN	B EQUIVALENT	263.5		
SILURIAN	B SALT			
SILURIAN	B ANHYDRITE	271.0		
SILURIAN	A2 CARBONATE	276.1		
SILURIAN	A2 SALT			
SILURIAN	A2 ANHYDRITE			
SILURIAN	A1 CARBONATE	286.8		
SILURIAN	A1 SALT			
SILURIAN	A1 ANHYDRITE			
SILURIAN	GUELPH	291.0		
SILURIAN	ERAMOSA			
SILURIAN	GOAT ISLAND			
SILURIAN	GASPORT/WARTON			
SILURIAN	DECEW	363.1		
SILURIAN	ROCHESTER	378.3		
SILURIAN	IRONDEQUOIT	387.6		
SILURIAN	REYNALES/FOSSIL HILL	390.3		
SILURIAN	THOROLD	391.8		
SILURIAN	GRIMSBY	397.0		
SILURIAN	CABOT HEAD	408.9		
SILURIAN	MANITOULIN	430.3		
SILURIAN	WHIRLPOOL	432.4		
ORDOVICIAN	QUEENSTON	434.5		
ORDOVICIAN	BLUE MOUNTAIN - GEORG. BAY			
ORDOVICIAN	COLLINGWOOD			
ORDOVICIAN	COBOURG			
ORDOVICIAN	VERULAM			
ORDOVICIAN	KIRKFIELD			
ORDOVICIAN	COBOCONK			
ORDOVICIAN	GULL RIVER			
ORDOVICIAN	SHADOW LAKE			
CAMBRIAN	CAMBRIAN			
PRECAMBRIAN	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Norfolk TWP Lake Erie BLK 91 TRAC F LOT CON

WELL NAME Place Long Point 91-F-1 PERMIT 7302 INIT CLASS NPW

OPERATOR TARGET CLI CUR STATUS DH-ABD

DRILLING DATA

CONTRACTOR Place Resources

RIG TYPE Cable DEPTHS

CABLE TOP NA KB ELEV 175.7

BOT 451.7 LOGGER 450.2

ROTRY TOP DRILLER 451.7

BOT DEEP END

DRLG FLD PLUG BK

DATES

PERMIT 1988-05-12

SPUD 1988-08-10

COMPTD 1988-10-14

OFFCNF 1989-10-14

WRKOVR

ABNDND 1988-10-20

COORDINATES

NORTH m

SOUTH m

EAST m

WEST m

LAT 42 33 52.2

LONG 80 14 40

SAMPLES

TOP 89.9

BOT 451.7

TRAY 9028

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
273	60.3	90.2	SHO	0
219	35.7	101.5	BAR	0
114	14.1	385.6	PAC	385.6

COMPLETION DATA

GAS $10^3m^3/d$

OIL m^3/d

SIP kPa

FORM

INTRVL m

m

m

PERF ☐ OPEN HOLE ☐

REMARKS

Poor log

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
0.0 – 450.2	GRNL	CHPL
0.0 – 450.2	DENL	"
–		
–		
–		
–		

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS

		TOP	ELEV	THICK
	KB / LAKE LEVEL	1.0		
	~~ERRXX~~ LAKE BOTTOM	NA		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON			
	MARCELLUS			
	DUNDEE	90.2		
	COLUMBUS			
	LUCAS			
	AMHERSTBURG	114.0		
	SYLVANIA			
	BOIS BLANC	141.5		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	153.7		
	G SHALE	181.4		
	F SHALE	186.5		
	F SALT			
	E CARBONATE	225.2		
	D SALT/EQUIVALENT			
	C SHALE	247.0		
	B MARKER	252.4		
	B EQUIVALENT	258.2		
	B SALT			
	B ANHYDRITE			
	A2 CARBONATE	264.0		
	A2 SALT			
	A2 ANHYDRITE			
	A1 CARBONATE	276.1		
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH	281.5		
	ERAMOSA			
	GOAT ISLAND			
	GASPORT/WARTON			
	DECEW	373.1		
	ROCHESTER	391.4		
	IRONDEQUOIT	402.3		
	REYNALES/FOSSIL HILL	403.6		
	THOROLD	406.0		
	GRIMSBY	410.0		
	CABOT HEAD	421.2		
	MANITOULIN	443.0		
	WHIRLPOOL	445.3		
ORDOVICIAN	QUEENSTON	448.0		
	BLUE MOUNTAIN - GEORG BAY			
	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
	CAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Norfolk TWP Lake Erie BLK 91 TRAC F LOT CON

WELL NAME Place Long Point 91-F-2 PERMIT 7288 INIT CLASS NPW

OPERATOR Place Resources Corp. TARGET CLI CUR STATUS GP

DRILLING DATA

CONTRACTOR Place Resources

RIG TYPE Cable DEPTHS

CABLE TOP NA KB ELEV 175.7

BOT 419.1 LOGGER 416.5

ROTRY TOP DRILLER 419.1

BOT DEEP END

DRLG FLD PLUG BK

DATES

PERMIT 1988-05-06

SPUD 1988-05-05

COMPTD 1988-08-03

OFFCNF 1989-08-03

WRKOVR

ABNDND

COORDINATES

NORTH m

SOUTH m

EAST m

WEST m

LAT 42 33 58

LONG 80 14 57

SAMPLES

TOP 93.3

BOT 419.1

TRAY 4396

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
407.8 –	Show	NA
409.0 – 410.3	4.9	NA
411.5 – 413.3	5.0	NA
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
273	60.3	92.4	SHO	0
219	35.7	108.2	BAR	0
114	14.1	383.1	BHP	0

COMPLETION DATA

GAS NA $10^3m^3/d$

OIL m^3/d

SIP 3964.5 kPa

FORM

INTRVL 407.8-413.3 m

m

m

PERF ☐ OPEN HOLE ☐

REMARKS

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
0.0 – 414.5	GRNL	CHPL
0.0 – 414.5	DENL	"
–		
–		
–		
–		

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
108.2 –	NA	FRE
120.1 –	NA	SUL
289.3 –	NA	SUL
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS

		TOP	ELEV	THICK
	KB / LAKE LEVEL	1.0		
	~~ERRXX~~ LAKE BOTTOM	NA		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON			
	MARCELLUS			
	DUNDEE	93.3		
	COLUMBUS			
	LUCAS			
	AMHERSTBURG	121.0		
	SYLVANIA			
	BOIS BLANC	139.5		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	157.3		
	G SHALE	178.9		
	F SHALE	184.7		
	F SALT			
	E CARBONATE	220.7		
	D SALT/EQUIVALENT			
	C SHALE	242.9		
	B MARKER	251.2		
	B EQUIVALENT	256.0		
	B SALT			
	B ANHYDRITE	264.0		
	A2 CARBONATE	268.8		
	A2 SALT			
	A2 ANHYDRITE			
	A1 CARBONATE	280.7		
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH	283.5		
	ERAMOSA			
	GOAT ISLAND			
	GASPORT/WARTON			
	DECEW	357.5		
	ROCHESTER	382.5		
	IRONDEQUOIT	393.8		
	REYNALES/FOSSIL HILL	395.6		
	THOROLD	397.5		
	GRIMSBY	398.2		
	CABOT HEAD	417.4		
	MANITOULIN			
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON			
	BLUE MOUNTAIN - GEORG BAY			
	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
	CAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

T.R. Carter

CTY Norfolk TWP Lake Erie BLK 93 TRAC F LOT CON

WELL NAME Consumers 13913 Lake Erie 93-F PERMIT 7263 INIT CLASS DEV

OPERATOR The Consumers' Gas Co. Ltd TARGET CLI CUR STATUS GS-ABD

DRILLING DATA				DATES		COORDINATES		SAMPLES	
CONTRACTOR	Underwater Gas Developers Ltd			PERMIT	1988-05-03	NORTH	m	TOP	115.0
RIG TYPE	Rotary	DEPTHS		SPUD	1988-05-14	SOUTH	m	BOT	473.0
CABLE TOP		KB ELEV	181.2	COMPTD	1988-05-18	EAST	m	TRAY	6853
BOT		LOGGER	473.4	OFFCNF	1988-06-17	WEST	m		
ROTRY TOP	20.7	DRILLER	473.0	WRKOVR		LAT	42 33 31.3		
BOT	473.0	DEEP END		ABNDND	1988-05-19	LONG	80 24 40.9		
DRLG FLD		PLUG BK							

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
413.0 – 423.0	3.0	5031
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
273	75.9	20.7	HAN	20.7
244	53.6	115.2	CEM	0
178	29.8	187.6	CEM	0

COMPLETION DATA

GAS 10³m³/d

OIL m³/d

SIP kPa

FORM

INTRVL m

m

m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
0.0 – 472.5	GRNL	SCH
187.4 – 472.5	DENL	"
187.4 – 472.7	DLLM	"
187.4 – 472.7	CBLK	"
–		
–		
–		

PERF ☐ OPEN HOLE ☐

REMARKS

DST #1 - 413.0-423.0

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	MM
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS		TOP	ELEV	THICK
	KB / LAKE LEVEL	6.5		
	DRIFT / LAKE BOTTOM	20.7		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON			
	MARCELLUS			
	DUNDEE	115.0		
	COLUMBUS			
	LUCAS			
	AMHERSTBURG	148.0		
	SYLVANIA			
	BOIS BLANC	162.0		
	SPRINGVALE			
	ORISKANY	188.5		
SILURIAN	BASS ISLANDS	190.0		
	G SHALE	216.4		
	F SHALE	223.0		
	F SALT			
	E CARBONATE	260.7		
	D SALT/EQUIVALENT			
	C SHALE	285.4		
	B MARKER	293.1		
	B EQUIVALENT	298.5		
	B SALT			
	B ANHYDRITE	305.9		
	A2 CARBONATE	310.9		
	A2 SALT			

	A2 ANHYDRITE			
	A1 CARBONATE	323.0		
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH	326.9		
	ERAMOSA			
	GOAT ISLAND			
SILURIAN	GASPORT/WIARTON			
	DECEW	383.5		
	ROCHESTER	400.8		
	IRONDEQUOIT	411.7		
	REYNALES/FOSSIL HILL	414.0		
	THOROLD	415.2		
	GRIMSBY	418.0		
	CABOT HEAD	430.0		
	MANITOULIN	452.9		
	WHIRLPOOL	456.2		
	QUEENSTON	457.2		
	BLUE MOUNTAIN - GEORG BAY			
ORDOVICIAN	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
	CAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY: T.R. CARTER

CTY Norfolk TWP Lake Erie BLK 124 TRAC N LOT CON

WELL NAME Consumers 13916 Lake Erie 124-N PERMIT 7266 INIT CLASS DEV

OPERATOR The Consumers' Gas Co. Ltd TARGET SAL CUR STATUS GP

DRILLING DATA				DATES		COORDINATES		SAMPLES	
CONTRACTOR	Underwater Gas Developers Ltd			PERMIT	1988-05-03	NORTH	m	TOP	129.0
RIG TYPE	Rotary	DEPTHS		SPUD	1988-05-07	SOUTH	m	BOT	355.0
CABLE TOP		KB ELEV	181.2	COMPTD	1988-05-10	EAST	m	TRAY	6674
BOT		LOGGER	355.0	OFFCNF	1988-06-19	WEST	m		
ROTRY TOP	25.3	DRILLER	355.0	WRKOVR		LAT	42 27 47.5		
BOT	355.0	DEEP END		ABNDND		LONG	80 33 53.3		
DRLG FLD		PLUG BK							

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
345.0 – 355.0	2.3	3747
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
273	75.9	25.3	HAN	25.3
244	53.6	129.7	CEM	0
178	29.8	213.4	CEM	0
114	14.4	344.3	CEM	0
60	7.0	354.0	HAN	0

COMPLETION DATA

GAS 8.1 10³m³/d

OIL m³/d

SIP kPa

FORM Guelph

INTRVL NA m

m

m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
22.0 – 354.0	GRNL	SCH
213.0 – 354.0	DENL	"
–		
–		
–		
–		
–		

PERF ☐ OPEN HOLE ☒

REMARKS

DST #1 - 345.0-355.0

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	MM
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS		TOP	ELEV	THICK
	KB / LAKE LEVEL	6.5		
	DRIFT / LAKE BOTTOM	25.3		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON			
	MARCELLUS	125.0		
	DUNDEE	139.4		
	COLUMBUS			
	LUCAS			
	AMHERSTBURG	174.0		
	SYLVANIA			
	BOIS BLANC	199.0		
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	212.5		
	G SHALE	237.3		
	F SHALE	244.4		
	F SALT			
	E CARBONATE	282.0		
	D SALT/EQUIVALENT			
	C SHALE	303.5		
	B MARKER	318.0		
	B EQUIVALENT	323.6		
	B SALT			
	B ANHYDRITE	331.0		
	A2 CARBONATE	336.1		
	A2 SALT			

	A2 ANHYDRITE			
	A1 CARBONATE	346.5		
	A1 SALT			
	A1 ANHYDRITE			
	GUELPH	353.0		
	ERAMOSA			
	GOAT ISLAND			
SILURIAN	GASPORT/WIARTON			
	DECEW			
	ROCHESTER			
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL			
	THOROLD			
	GRIMSBY			
	CABOT HEAD			
	MANITOULIN			
	WHIRLPOOL			
	QUEENSTON			
	BLUE MOUNTAIN - GEORG BAY			
ORDOVICIAN	COLLINGWOOD			
	COBOURG			
	VERULAM			
	KIRKFIELD			
	COBOCONK			
	GULL RIVER			
	SHADOW LAKE			
	CAMBRIAN			
	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Norfolk TWP Lake Erie BLK 124 TRAC 0 LOT CON
WELL NAME Consumers 13907 Lake Erie 124-O PERMIT 7262 INIT CLASS DEV
OPERATOR The Consumers' Gas Co. Ltd TARGET SAL CUR STATUS GS-ABD

DRILLING DATA

CONTRACTOR Underwater Gas Developers Ltd
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 181.1
BOT LOGGER 356.0
ROTRY TOP 25.3 DRILLER 356.0
BOT 356.0 DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-04-27
SPUD 1988-05-03
COMPTD 1988-05-06
OFFCNF 1988-06-05
WRKOVR
ABNDND 1988-05-07

COORDINATES

NORTH m
SOUTH m
EAST m
WEST m
LAT 42 27 18.3
LONG 80 34 15.8

SAMPLES

TOP 132.0
BOT 356.0
TRAY 7948

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
341.0 – 356.0	.9	3940
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
273	75.9	25.3	HAN	25.3
244	53.6	132.8	CEM	0
178	25.3	209.5	CEM	0

COMPLETION DATA

GAS $10^3 m^3/d$
OIL m^3/d
SIP kPa
FORM
INTRVL m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
19.0 – 355.0	GRNL	SCH
210.0 – 355.0	DENL	"
–		
–		
–		
–		
–		

PERF ☐ OPEN HOLE ☐

REMARKS

DST #1 - 341.0-356.0

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	MM
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / LAKE LEVEL	6.4		
DRIFT / LAKE BOTTOM	25.3		
DEVONIAN: PORT LAMBTON			
DEVONIAN: KETTLE POINT			
DEVONIAN: HAMILTON			
DEVONIAN: MARCELLUS	124.0		
DEVONIAN: DUNDEE	143.0		
DEVONIAN: COLUMBUS			
DEVONIAN: LUCAS			
DEVONIAN: AMHERSTBURG	186.0		
DEVONIAN: SYLVANIA			
DEVONIAN: BOIS BLANC	200.5		
DEVONIAN: SPRINGVALE			
DEVONIAN: ORISKANY			
SILURIAN: BASS ISLANDS	216.5		
SILURIAN: G SHALE	242.9		
SILURIAN: F SHALE	250.2		
SILURIAN: F SALT			
SILURIAN: E CARBONATE	287.0		
SILURIAN: D SALT/EQUIVALENT			
SILURIAN: C SHALE	310.0		
SILURIAN: B MARKER	320.0		
SILURIAN: B EQUIVALENT	325.2		
SILURIAN: B SALT			
SILURIAN: B ANHYDRITE	333.0		
SILURIAN: A2 CARBONATE	338.4		
SILURIAN: A2 SALT			
SILURIAN: A2 ANHYDRITE			
SILURIAN: A1 CARBONATE	347.0		
SILURIAN: A1 SALT			
SILURIAN: A1 ANHYDRITE			
SILURIAN: GUELPH	351.3		
SILURIAN: ERAMOSA			
SILURIAN: GOAT ISLAND			
SILURIAN: GASPORT/WARTON			
SILURIAN: DECEW			
SILURIAN: ROCHESTER			
SILURIAN: IRONDEQUOIT			
SILURIAN: REYNALES/FOSSIL HILL			
SILURIAN: THOROLD			
SILURIAN: GRIMSBY			
SILURIAN: CABOT HEAD			
SILURIAN: MANITOULIN			
SILURIAN: WHIRLPOOL			
ORDOVICIAN: QUEENSTON			
ORDOVICIAN: BLUE MOUNTAIN - GEORG BAY			
ORDOVICIAN: COLLINGWOOD			
ORDOVICIAN: COBOURG			
ORDOVICIAN: VERULAM			
ORDOVICIAN: KIRKFIELD			
ORDOVICIAN: COBOCONK			
ORDOVICIAN: GULL RIVER			
ORDOVICIAN: SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Norfolk TWP Lake Erie BLK 153 TRAC H LOT CON
WELL NAME Consumers 13920 Lake Erie 153-H PERMIT 7270 INIT CLASS DEV
OPERATOR The Consumers' Gas Co Ltd TARGET CLI CUR STATUS DH-ABD

DRILLING DATA

CONTRACTOR Underwater Gas Developers Ltd
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV
BOT LOGGER
ROTRY TOP 27.4 DRILLER
BOT 568.0 DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-05-03
SPUD 1988-05-19
COMPTD 1988-05-23
OFFCNF 1988-06-22
WRKOVR
ABNDND 1988-05-23

COORDINATES

NORTH m
SOUTH m
EAST m
WEST m
LAT 42 23 45
LONG 80 32 59.4

SAMPLES

TOP 130.0
BOT 568.0
TRAY 7995

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
273	75.9	27.4	HAN	0
178	29.8	242.5	CEM	0
244	53.6	130.0	CEM	0

COMPLETION DATA

GAS $10^3 m^3/d$
OIL m^3/d
SIP kPa
FORM
INTRVL m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
27.5 – 567.1	GRNL	SCH
243.0 – 567.1	DENL	"
27.5 – 567.1	DLLM	"
400.0 – 558.2	CBLK	"
–		
–		
–		

PERF ☐ OPEN HOLE ☐

REMARKS

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	MM
–			
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / LAKE LEVEL	6.5		
DRIFT / LAKE BOTTOM	27.4		
DEVONIAN: PORT LAMBTON			
DEVONIAN: KETTLE POINT	130.0		
DEVONIAN: HAMILTON	134.5		
DEVONIAN: MARCELLUS	180.2		
DEVONIAN: DUNDEE	192.2		
DEVONIAN: COLUMBUS			
DEVONIAN: LUCAS			
DEVONIAN: AMHERSTBURG	227.0		
DEVONIAN: SYLVANIA			
DEVONIAN: BOIS BLANC	248.0		
DEVONIAN: SPRINGVALE			
DEVONIAN: ORISKANY			
SILURIAN: BASS ISLANDS	260.7		
SILURIAN: G SHALE	295.8		
SILURIAN: F SHALE	303.0		
SILURIAN: F SALT			
SILURIAN: E CARBONATE	339.5		
SILURIAN: D SALT/EQUIVALENT			
SILURIAN: C SHALE	362.0		
SILURIAN: B MARKER	371.2		
SILURIAN: B EQUIVALENT	377.0		
SILURIAN: B SALT			
SILURIAN: B ANHYDRITE	386.6		
SILURIAN: A2 CARBONATE	391.1		
SILURIAN: A2 SALT			
SILURIAN: A2 ANHYDRITE			
SILURIAN: A1 CARBONATE		400.2	
SILURIAN: A1 SALT			
SILURIAN: A1 ANHYDRITE			
SILURIAN: GUELPH		405.9	
SILURIAN: ERAMOSA			
SILURIAN: GOAT ISLAND			
SILURIAN: GASPORT/WARTON			
SILURIAN: DECEW		477.8	
SILURIAN: ROCHESTER		497.0	
SILURIAN: IRONDEQUOIT		510.3	
SILURIAN: REYNALES/FOSSIL HILL		512.5	
SILURIAN: THOROLD		514.0	
SILURIAN: GRIMSBY		516.0	
SILURIAN: CABOT HEAD		528.0	
SILURIAN: MANITOULIN		554.4	
SILURIAN: WHIRLPOOL		558.0	
ORDOVICIAN: QUEENSTON		559.4	
ORDOVICIAN: BLUE MOUNTAIN - GEORG BAY			
ORDOVICIAN: COLLINGWOOD			
ORDOVICIAN: COBOURG			
ORDOVICIAN: VERULAM			
ORDOVICIAN: KIRKFIELD			
ORDOVICIAN: COBOCONK			
ORDOVICIAN: GULL RIVER			
ORDOVICIAN: SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Norfolk TWP North Walsingham BLK TRAC 6 LOT 14 CON VII

WELL NAME F & M 14 N. Walsingham 6-14-VII PERMIT 7208 INIT CLASS DEV

OPERATOR F & M Resources Ltd TARGET CLI CUR STATUS GP-OS

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	Murray Rose Drilling			PERMIT	1987-12-10	NORTH	585.5	m	TOP	71.3
RIG TYPE	Cable	DEPTHS		SPUD	1987-11-24	SOUTH		m	BOT	388.6
CABLE TOP	1.0	KB ELEV	204.7	COMPTD	1988-02-03	EAST	152.4	m	TRAY	9202
BOT	402.9	LOGGER		OFFCNF	1988-03-05	WEST		m		
ROTRY TOP		DRILLER	402.9	WRKOVR		LAT	42 41 41.5			
BOT		DEEP END		ABNOND		LONG	80 31 47			
DRLG FLD		PLUG BK								

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA		
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS	NA	$10^3 m^3/d$
389.5 – 390.7	0.1	NA	254	NA	71.3	SHO	71.3	OIL	NA	m^3/d
–			203	NA	82.9		0	SIP	NA	kPa
–			102	NA	388.9	CEM	0	FORM	Clinton	
–								INTRVL	NA	m
–										m
–										m

INITIAL OIL RECORD			LOGGING RECORD			PERF ☐	OPEN HOLE ☒
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	REMARKS	
389.5 –	Show	NA	–			No samples for Grimsby	
–			–			or Cabot Head –	
–			–			operator picks	
–			–				
–			–				

INITIAL WATER RECORD			CORING RECORD			
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	mm
76.8 –	18.3	SUL	–			
–			–			
–			–			
–			–			
–			–			

GEOLOGICAL CONTACTS		TOP	ELEV	THICK
	KB / LAKE LEVEL	0.0		
	DRIFT / LAKE BOTTOM	1.0		
DEVONIAN	PORT LAMBTON			
DEVONIAN	KETTLE POINT			
DEVONIAN	HAMILTON			
DEVONIAN	MARCELLUS			
DEVONIAN	DUNDEE	71.3		
DEVONIAN	COLUMBUS			
DEVONIAN	LUCAS			
DEVONIAN	AMHERSTBURG	110.0		
DEVONIAN	SYLVANIA			
DEVONIAN	BOIS BLANC	134.0		
DEVONIAN	SPRINGVALE			
DEVONIAN	ORISKANY			
SILURIAN	BASS ISLANDS	164.0		
SILURIAN	G SHALE	185.6		
SILURIAN	F SHALE	191.4		
SILURIAN	F SALT			
SILURIAN	E CARBONATE	219.5		
SILURIAN	D SALT/EQUIVALENT			
SILURIAN	C SHALE	248.4		
SILURIAN	B MARKER	260.9		
SILURIAN	B EQUIVALENT	267.8		
SILURIAN	B SALT			
SILURIAN	B ANHYDRITE	277.0		
SILURIAN	A2 CARBONATE	281.4		
SILURIAN	A2 SALT			
SILURIAN	A2 ANHYDRITE			
SILURIAN	A1 CARBONATE	288.0		
SILURIAN	A1 SALT			
SILURIAN	A1 ANHYDRITE			
SILURIAN	GUELPH	297.2		
SILURIAN	ERAMOSA			
SILURIAN	GOAT ISLAND			
SILURIAN	GASPORT/WIARTON			
SILURIAN	DECEW	265.2		
SILURIAN	ROCHESTER	368.2		
SILURIAN	IRONDEQUOIT			
SILURIAN	REYNALES/FOSSIL HILL	384.6		
SILURIAN	THOROLD			
SILURIAN	GRIMSBY	395.6		
SILURIAN	CABOT HEAD	399.3		
SILURIAN	MANITOULIN			
ORDOVICIAN	WHIRLPOOL			
ORDOVICIAN	QUEENSTON			
ORDOVICIAN	BLUE MOUNTAIN - GEORG BAY			
ORDOVICIAN	COLLINGWOOD			
ORDOVICIAN	COBOURG			
ORDOVICIAN	VERULAM			
ORDOVICIAN	KIRKFIELD			
ORDOVICIAN	COBOCONK			
ORDOVICIAN	GULL RIVER			
ORDOVICIAN	SHADOW LAKE			
CAMBRIAN	CAMBRIAN			
PRECAMBRIAN	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Norfolk TWP North Walsingham BLK TRAC 2 LOT 17 CON IX

WELL NAME Bayview 17 N. Walsingham 2-17-IX PERMIT 7320 INIT CLASS DEV

OPERATOR Bayview Explorations Ltd TARGET CLI CUR STATUS GP

DRILLING DATA				DATES		COORDINATES			SAMPLES	
CONTRACTOR	Murray Rose Drilling			PERMIT	1988-05-30	NORTH		m	TOP	67.4
RIG TYPE	Cable	DEPTHS		SPUD	1988-06-06	SOUTH	113.8	m	BOT	385.6
CABLE TOP	1.0	KB ELEV	210.3	COMPTD	1988-08-05	EAST		m	TRAY	9463
BOT	388.6	LOGGER		OFFCNF	1988-09-04	WEST	441.3	m		
ROTRY TOP		DRILLER	388.6	WRKOVR		LAT	42 43 49			
BOT		DEEP END		ABNOND		LONG	80 31 54			
DRLG FLD		PLUG BK	386.2							

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA		
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS		$10^3 m^3/d$
382.5 – 386.2	0.2	3619.7	273.1	60.3	67.7	SHO	0	OIL		m^3/d
–			177.8	25.3	134.1	CEM	0	SIP		kPa
–			114.3	14.1	381.3	CEM	0	FORM		
–								INTRVL		m
–										m
–										m

INITIAL OIL RECORD			LOGGING RECORD			PERF ☐	OPEN HOLE ☐
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	REMARKS	
–			–			Completion results not	
–			–			reported.	
–			–				
–			–			Samples mixed up	
–			–			224.6-265.8.	
–			–			Poor samples 373-TD,	

INITIAL WATER RECORD			CORING RECORD			
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	mm
75.0 –	10.4	SUL	–			
150.9 –	NA	BLK	–			
–			–			
–			–			
–			–			

used operator picks.

GEOLOGICAL CONTACTS		TOP	ELEV	THICK
	KB / LAKE LEVEL	0.0		
	DRIFT / LAKE BOTTOM	1.0		
DEVONIAN	PORT LAMBTON			
DEVONIAN	KETTLE POINT			
DEVONIAN	HAMILTON			
DEVONIAN	MARCELLUS			
DEVONIAN	DUNDEE	67.7		
DEVONIAN	COLUMBUS			
DEVONIAN	LUCAS			
DEVONIAN	AMHERSTBURG	108.8		
DEVONIAN	SYLVANIA			
DEVONIAN	BOIS BLANC	149.3		
DEVONIAN	SPRINGVALE	163.1		
DEVONIAN	ORISKANY			
SILURIAN	BASS ISLANDS	163.4		
SILURIAN	G SHALE	181.4		
SILURIAN	F SHALE	187.8		
SILURIAN	F SALT			
SILURIAN	E CARBONATE	213.4		
SILURIAN	D SALT/EQUIVALENT			
SILURIAN	C SHALE			
SILURIAN	B MARKER			
SILURIAN	B EQUIVALENT			
SILURIAN	B SALT			
SILURIAN	B ANHYDRITE			
SILURIAN	A2 CARBONATE	271.9		
SILURIAN	A2 SALT			
SILURIAN	A2 ANHYDRITE			
SILURIAN	A1 CARBONATE	281.6		
SILURIAN	A1 SALT			
SILURIAN	A1 ANHYDRITE			
SILURIAN	GUELPH	288.3		
SILURIAN	ERAMOSA			
SILURIAN	GOAT ISLAND			
SILURIAN	GASPORT/WIARTON	-		
SILURIAN	DECEW			
SILURIAN	ROCHESTER	356.0		
SILURIAN	IRONDEQUOIT			
SILURIAN	REYNALES/FOSSIL HILL	377.6		
SILURIAN	THOROLD	381.3		
SILURIAN	GRIMSBY	384.1		
SILURIAN	CABOT HEAD	385.6		
SILURIAN	MANITOULIN			
ORDOVICIAN	WHIRLPOOL			
ORDOVICIAN	QUEENSTON			
ORDOVICIAN	BLUE MOUNTAIN - GEORG BAY			
ORDOVICIAN	COLLINGWOOD			
ORDOVICIAN	COBOURG			
ORDOVICIAN	VERULAM			
ORDOVICIAN	KIRKFIELD			
ORDOVICIAN	COBOCONK			
ORDOVICIAN	GULL RIVER			
ORDOVICIAN	SHADOW LAKE			
CAMBRIAN	CAMBRIAN			
PRECAMBRIAN	PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Norfolk TWP North Walsingham BLK TRAC 3 LOT 17 CON IX

WELL NAME Bayview 16 N. Walsingham 3-17-IX PERMIT 7253 INIT CLASS NPW

OPERATOR Bayview Explorations Ltd TARGET CLI CUR STATUS GP

DRILLING DATA

CONTRACTOR Murray Rose Drilling
RIG TYPE Cable DEPTHS
CABLE TOP 1.0 KB ELEV 200.3
BOT 378.3 LOGGER
ROTRY TOP DRILLER 378.3
BOT DEEP END
DRLG FLD PLUG BK 371.9

DATES

PERMIT 1988-03-21
SPUD 1988-03-22
COMPTD 1988-05-12
OFFCNF 1989-05-12
WRKOVR
ABNOND

COORDINATES

NORTH m
SOUTH 572.5 m
EAST m
WEST 459.7 m
LAT 42 43 36.5
LONG 80 31 45

SAMPLES

TOP 56.7
BOT 376.1
TRAY 4457

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
370.0 – 371.9	.9	3516.3
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
273	60.3	56.7	SHO	19.2
219	35.7	67.7	CEM	0
114	14.1	369.4	CEM	0

COMPLETION DATA

GAS NA $10^3 m^3/d$
OIL m^3/d
SIP kPa
FORM Thorold/Grimsby*
INTRVL * m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
–		
–		
–		
–		
–		
–		

PERF ☐ OPEN HOLE ☒

REMARKS

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
62.5 –	0.3	SUL
117.0 –	NA	NA
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / DRILLFLOOR	0.0		
DRIFT / UNCONSOLIDATED	1.0		
DEVONIAN: PORT LAMBTON			
KETTLE POINT			
HAMILTON			
MARCELLUS			
DUNDEE	56.7		
COLUMBUS			
LUCAS			
AMHERSTBURG	98.2		
SYLVANIA			
BOIS BLANC	137.0		
SPRINGVALE			
ORISKANY			
SILURIAN: BASS ISLANDS	151.0		
G SHALE	168.5		
F SHALE	174.0		
F SALT			
E CARBONATE	209.4		
D SALT/EQUIVALENT			
C SHALE	233.0		
B MARKER	246.0		
B EQUIVALENT	249.0		
B SALT			
B ANHYDRITE	258.0		
A2 CARBONATE	262.0		
A2 SALT			
A2 ANHYDRITE			
A1 CARBONATE	271.0		
A1 SALT			
A1 ANHYDRITE			
GUELPH	280.2		
ERAMOSA			
GOAT ISLAND			
GASPORT/MARTON			
DECEW	347.0		
ROCHESTER	349.5		
IRONDEQUOIT	365.8		
REYNALES/FOSSIL HILL	368.0		
THOROLD	369.1		
GRIMSBY	374.1		
CABOT HEAD	375.8		
MANITOULIN			
WHIRLPOOL			
ORDOVICIAN: QUEENSTON			
BLUE MOUNTAIN - GEORG. BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Norfolk TWP Townsend BLK TRAC 2 LOT 12 CON XII

WELL NAME Sandy No. 1 Townsend 2-12-XII PERMIT 7416 INIT CLASS DEV

OPERATOR Elgin Mitchell and Sons TARGET CLI CUR STATUS GP

DRILLING DATA

CONTRACTOR Elgin Mitchell and Sons
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV 219.6
BOT LOGGER
ROTRY TOP 1.0 DRILLER 304.8
BOT 304.8 DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-11-09
SPUD 1988-10-31
COMPTD 1988-11-09
OFFCNF 1988-12-09
WRKOVR
ABNOND

COORDINATES

NORTH m
SOUTH 121.2 m
EAST 181.9 m
WEST m
LAT 42 53 31.5
LONG 80 14 16

SAMPLES

TOP 17.7
BOT 304.8
TRAY 4389

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
111.3 –	Show	NA
163.9 –	Show	NA
264.3 – 272.8	0.1	1792.6
300.8 – 301.4	Show	NA
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
219	35.7	19.5	SHO	0
60.3	NA	261.5	HWP	0

COMPLETION DATA

GAS 0.2 $10^3 m^3/d$
OIL m^3/d
SIP 1792.6 kPa
FORM Clinton
INTRVL 264.3-272.8 m
300.8-301.4 m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
–		
–		
–		
–		
–		
–		

PERF ☐ OPEN HOLE ☒

REMARKS

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
24.7 –	NA	FRE
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / DRILLFLOOR	0.0		
DRIFT / UNCONSOLIDATED	1.0		
DEVONIAN: PORT LAMBTON			
KETTLE POINT			
HAMILTON			
MARCELLUS			
DUNDEE			
COLUMBUS			
LUCAS			
AMHERSTBURG	17.7		
SYLVANIA			
BOIS BLANC	27.5		
SPRINGVALE	42.1		
ORISKANY			
SILURIAN: BASS ISLANDS	42.8		
G SHALE	56.5		
F SHALE	61.0		
F SALT			
E CARBONATE	99.5		
D SALT/EQUIVALENT			
C SHALE	118.9		
B MARKER	128.0		
B EQUIVALENT	134.1		
B SALT			
B ANHYDRITE	139.2		
A2 CARBONATE	146.0		
A2 SALT			
A2 ANHYDRITE			
A1 CARBONATE	153.0		
A1 SALT			
A1 ANHYDRITE			
GUELPH	159.0		
ERAMOSA			
GOAT ISLAND			
GASPORT/MARTON			
DECEW	232.0		
ROCHESTER	250.0		
IRONDEQUOIT	262.5		
REYNALES/FOSSIL HILL	266.0		
THOROLD	267.9		
GRIMSBY	271.3		
CABOT HEAD	287.0		
MANITOULIN	298.0		
WHIRLPOOL	301.4		
ORDOVICIAN: QUEENSTON	302.0		
BLUE MOUNTAIN - GEORG. BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

T.R. Carter

CTY	Oxford	TWP	Blandford	BLK	TRAC	1	LOT	5	CON	VII
WELL NAME	Riley Chetwynd Blandford 1-5-VII			PERMIT	7206		INIT CLASS	DEV		
OPERATOR	Old Colony Petroleum Ltd			TARGET	CAM		CUR STATUS	OS-SUS		

DRILLING DATA				DATES		COORDINATES			SAMPLES
CONTRACTOR	Elgin Mitchell and Sons			PERMIT	1987-12-08	NORTH		m	TOP
RIG TYPE	Cable	DEPTHS		SPUD	1987-11-09	SOUTH	340.7	m	BOT
CABLE TOP	1.3	KB ELEV	298.3	COMPTD	1988-04-05	EAST		m	TRAY 10073-
BOT	890.6	LOGGER		OFFCNF	1988-05-05	WEST	275.4	m	74
ROTRY TOP		DRILLER	890.6	WRKOVR		LAT	43 13 29.5		
BOT		DEEP END		ABNDND		LONG	80-40-32.5		
DRLG FLD		PLUG BK							

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS	$10^3 m^3/d$
–			273	NR	38.1	SHO	0	OIL	m^3/d
–			219	NR	75.3	BAR	0	SIP	kPa
–			177	NR	292.9	CEM	0	FORM	
–								INTRVL	m
–									m
–									m

INITIAL OIL RECORD			LOGGING RECORD			PERF ☐ OPEN HOLE ☐
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	REMARKS
876.0 –	Show		–			Suspended
–			–			Upper 10 metres of
–			–			Precambrian altered -
–			–			little or no preserved
–			–			mafic minerals.

INITIAL WATER RECORD			CORING RECORD			
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	mm
37.5 –		FRE	–			
188.7 –	13.1	SUL	–			
–			–			
–			–			
–			–			
–			–			

GEOLOGICAL CONTACTS		TOP	ELEV	THICK
	KB / LAKE LEVEL	0.0		
	DRIFT / LAKE BOTTOM	1.3		
DEVONIAN	PORT LAMBTON			
DEVONIAN	KETTLE POINT			
DEVONIAN	HAMILTON			
DEVONIAN	MARCELLUS			
DEVONIAN	DUNDEE			
DEVONIAN	COLUMBUS			
DEVONIAN	LUCAS			
DEVONIAN	AMHERSTBURG			
DEVONIAN	SYLVANIA			
DEVONIAN	BOIS BLANC			
DEVONIAN	SPRINGVALE			
DEVONIAN	ORISKANY			
SILURIAN	BASS ISLANDS			
SILURIAN	G SHALE			
SILURIAN	F SHALE			
SILURIAN	F SALT			
SILURIAN	E CARBONATE	36.9		
SILURIAN	D SALT/EQUIVALENT			
SILURIAN	C SHALE	67.5		
SILURIAN	B MARKER	78.5		
SILURIAN	B EQUIVALENT	87.0		
SILURIAN	B SALT			
SILURIAN	B ANHYDRITE	95.5		
SILURIAN	A2 CARBONATE	99.7		
SILURIAN	A2 SALT			
SILURIAN	A2 ANHYDRITE			
SILURIAN	A1 CARBONATE	110.3		
SILURIAN	A1 SALT			
SILURIAN	A1 ANHYDRITE			
SILURIAN	GUELPH	119.5		
SILURIAN	ERAMOSA			
SILURIAN	GOAT ISLAND			
SILURIAN	GASPORT/WARTON			
SILURIAN	DECEW			
SILURIAN	ROCHESTER	246.7		
SILURIAN	IRONDEQUOIT			
SILURIAN	REYNALES/FOSSIL HILL	253.0		
SILURIAN	THOROLD			
SILURIAN	GRIMSBY			
SILURIAN	CABOT HEAD	265.1		
SILURIAN	MANITOULIN	272.0		
SILURIAN	WHIRLPOOL			
ORDOVICIAN	QUEENSTON	285.9		
ORDOVICIAN	BLUE MOUNTAIN - GEORG BAY	442.0		
ORDOVICIAN	COLLINGWOOD	621.0		
ORDOVICIAN	COBOURG	646.8		
ORDOVICIAN	VERULAM			
ORDOVICIAN	KIRKFIELD			
ORDOVICIAN	COBOCONK	801.0		
ORDOVICIAN	GULL RIVER			
ORDOVICIAN	SHADOW LAKE	870.7		
	CAMBRIAN	873.5		
	PRECAMBRIAN	875.0		

GEOLOGY BY: T.R. Carter

CTY	Oxford	TWP	Blandford	BLK	TRAC	2	LOT	7	CON	VIII
WELL NAME	Brett Blandford 2-7-VIII			PERMIT	7245		INIT CLASS	DEV		
OPERATOR	W. Brett and Assoc. Ltd			TARGET	CAM		CUR STATUS	GPOS		

DRILLING DATA				DATES		COORDINATES			SAMPLES
CONTRACTOR	Bothwell Drilling and Servicing			PERMIT	1988-02-29	NORTH		m	TOP 9.1
RIG TYPE	Rotary	DEPTHS		SPUD	1988-03-11	SOUTH	224.3	m	BOT 877.8
CABLE TOP		KB ELEV	310.5	COMPTD	1988-06-02	EAST	131.0	m	TRAY 9363-
BOT		LOGGER		OFFCNF	1988-07-02	WEST		m	64
ROTRY TOP	2.0	DRILLER	879.6	WRKOVR		LAT	43 14 16.5		
BOT	879.6	DEEP END		ABNDND		LONG	80 41 50		
DRLG FLD		PLUG BK							

INITIAL GAS RECORD			CASING AND TUBING RECORD					COMPLETION DATA	
INTERVAL	FLOW	SIP	DIAM	WEIGHT	SET AT	HOW SET	RECOV	GAS 22.7	$10^3 m^3/d$
129.5 –	Show	NA	339.7	101.2	10.7	CEM	0	OIL	m^3/d
876.6 –	22.7	2813	273.0	67.7	53.0	CEM	0	SIP 2813	kPa
–			177.8	47.6	303.9	CEM	0	FORM Cambrian	
–			114.3	15.6	872.6	CEM	0	INTRVL 876.6	m
–			60.3	NA	879.3	BAR	0		m
–									m

INITIAL OIL RECORD			LOGGING RECORD			PERF ☐ OPEN HOLE ☒
INTERVAL	FLOW	DENSITY	INTERVAL	TYPE	COMPANY	REMARKS
128.9 –	Show	NA	–			Numerous missing
–			–			samples - formation top
–			–			picks may be inaccurate.
–			–			* not picked
–			–			

INITIAL WATER RECORD			CORING RECORD			
INTERVAL	STAT LEV	TYPE	INTERVAL	LOCATION	NO	mm
12.2 – 23.8	NA	FRE	–			
27.7 – 46.9	Flowing	FRE	–			
74.7 – 76.7	NA	FRE	–			
–			–			
–			–			
–			–			

GEOLOGICAL CONTACTS		TOP	ELEV	THICK
	KB / LAKE LEVEL	0.0		
	DRIFT / LAKE BOTTOM	2.0		
DEVONIAN	PORT LAMBTON			
DEVONIAN	KETTLE POINT			
DEVONIAN	HAMILTON			
DEVONIAN	MARCELLUS			
DEVONIAN	DUNDEE			
DEVONIAN	COLUMBUS			
DEVONIAN	LUCAS			
DEVONIAN	AMHERSTBURG			
DEVONIAN	SYLVANIA			
DEVONIAN	BOIS BLANC			
DEVONIAN	SPRINGVALE			
DEVONIAN	ORISKANY			
SILURIAN	BASS ISLANDS	9.8		
SILURIAN	G SHALE	39.6		
SILURIAN	F SHALE	43.0		
SILURIAN	F SALT			
SILURIAN	E CARBONATE	82.0		
SILURIAN	D SALT/EQUIVALENT			
SILURIAN	C SHALE	*		
SILURIAN	B MARKER	*		
SILURIAN	B EQUIVALENT	*		
SILURIAN	B SALT			
SILURIAN	B ANHYDRITE	134.1		
SILURIAN	A2 CARBONATE	137.2		
SILURIAN	A2 SALT			
SILURIAN	A2 ANHYDRITE			
SILURIAN	A1 CARBONATE			
SILURIAN	A1 SALT			
SILURIAN	A1 ANHYDRITE			
SILURIAN	GUELPH	146.3		
SILURIAN	ERAMOSA			
SILURIAN	GOAT ISLAND			
SILURIAN	GASPORT/WARTON			
SILURIAN	DECEW			
SILURIAN	ROCHESTER	250.0		
SILURIAN	IRONDEQUOIT			
SILURIAN	REYNALES/FOSSIL HILL	268.2		
SILURIAN	THOROLD			
SILURIAN	GRIMSBY			
SILURIAN	CABOT HEAD	270.0		
SILURIAN	MANITOULIN	290.0		
SILURIAN	WHIRLPOOL			
ORDOVICIAN	QUEENSTON	298.0		
ORDOVICIAN	BLUE MOUNTAIN - GEORG BAY	443.5		
ORDOVICIAN	COLLINGWOOD			
ORDOVICIAN	COBOURG	655.0		
ORDOVICIAN	VERULAM	*		
ORDOVICIAN	KIRKFIELD	*		
ORDOVICIAN	COBOCONK	*		
ORDOVICIAN	GULL RIVER	*		
ORDOVICIAN	SHADOW LAKE	870.5		
	CAMBRIAN	874.5		
	PRECAMBRIAN			

GEOLOGY BY: T.R.Carter

CTY: Oxford TWP: Blandford BLK: TRAC: 1 LOT: 5 CON: VII

WELL NAME: Riley Chetwynd Blandford 1-5-VII PERMIT: 7206 INIT CLASS: DEV

OPERATOR: Old Colony Petroleum Ltd TARGET: CAM CUR STATUS: OS-SUS

DRILLING DATA

CONTRACTOR: Elgin Mitchell and Sons
RIG TYPE: Cable
CABLE TOP: 1.3
BOT: 890.6
ROTRY TOP:
DOT:
DRLG FLD:
DEPTHS
KB ELEV: 298.3
LOGGER
DRILLER: 890.6
DEEP END:
PLUG BK:

DATES

PERMIT: 1987-12-08
SPUD: 1987-11-09
COMPTD: 1988-04-05
OFFCNF: 1988-05-05
WRKOVR:
ABNDND:

COORDINATES

NORTH: m
SOUTH: 340.7 m
EAST: m
WEST: 275.4 m
LAT: 43 13 29.5
LONG: 80-40-32.5

SAMPLES

TOP:
BOT:
TRAY: 10073-
74

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
273	NR	38.1	SHO	0
219	NR	75.3	BAR	0
177	NR	292.9	CEM	0

COMPLETION DATA

GAS: $10^3 m^3/d$
OIL: m^3/d
SIP: kPa
FORM:
INTRVL: m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
876.0 –	Show	
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
–		
–		
–		
–		
–		
–		

PERF ☐ OPEN HOLE ☐

REMARKS

Suspended
Upper 10 metres of Precambrian altered - little or no preserved mafic minerals.

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
37.5 –		FRE
188.7 –	13.1	SUL
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			

GEOLOGICAL CONTACTS

		TOP	ELEV	THICK
	KB / LAKE LEVEL	0.0		
	DRIFT / LAKE BOTTOM	1.3		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON			
	MARCELLUS			
	DUNDEE			
	COLUMBUS			
	LUCAS			
	AMHERSTBURG			
	SYLVANIA			
	BOIS BLANC			
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS			
	G SHALE			
	F SHALE			
	F SALT			
	E CARBONATE	36.9		
	D SALT/EQUIVALENT			
	C SHALE	67.5		
	B MARKER	78.5		
	B EQUIVALENT	87.0		
	B SALT			
	B ANHYDRITE	95.5		
	A2 CARBONATE	99.7		
	A2 SALT			

	A2 ANHYDRITE			
	A1 CARBONATE	110.3		
	A1 SALT			
	A1 ANHYDRITE			
SILURIAN	GUELPH	119.5		
	ERAMOSA			
	GOAT ISLAND			
	GASPORT/MARTON			
	DECEW			
	ROCHESTER	246.7		
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL	253.0		
	THOROLD			
	GRIMSBY			
	CABOT HEAD	265.1		
	MANITOULIN	272.0		
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON	285.9		
	BLUE MOUNTAIN - GEORG BAY	442.0		
	COLLINGWOOD	621.0		
	COBOURG	646.8		
	VERULAM			
	KIRKFIELD			
	COBOCONK	801.0		
	GULL RIVER			
	SHADOW LAKE	870.7		
	CAMBRIAN	873.5		
	PRECAMBRIAN	875.0		

GEOLOGY BY: T.R. Carter

CTY: Oxford TWP: Blandford BLK: TRAC: 2 LOT: 7 CON: VIII

WELL NAME: Brett Blandford 2-7-VIII PERMIT: 7245 INIT CLASS: DEV

OPERATOR: H. Brett and Assoc. Ltd TARGET: CAM CUR STATUS: GPOS

DRILLING DATA

CONTRACTOR: Bothwell Drilling and Servicing
RIG TYPE: Rotary
CABLE TOP:
BOT:
ROTRY TOP: 2.0
BOT: 879.6
DRLG FLD
DEPTHS
KB ELEV: 310.5
LOGGER
DRILLER: 879.6
DEEP END:
PLUG BK:

DATES

PERMIT: 1988-02-29
SPUD: 1988-03-11
COMPTD: 1988-06-02
OFFCNF: 1988-07-02
WRKOVR:
ABNDND:

COORDINATES

NORTH: m
SOUTH: 224.3 m
EAST: 131.0 m
WEST: m
LAT: 43 14 16.5
LONG: 80 41 50

SAMPLES

TOP: 9.1
BOT: 877.8
TRAY: 9363-
64

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
129.5 –	Show	NA
876.6 –	22.7	2813
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
339.7	101.2	10.7	CEM	0
273.0	67.7	53.0	CEM	0
177.8	47.6	303.9	CEM	0
114.3	15.6	872.6	CEM	0
60.3	NA	879.3	BAR	0

COMPLETION DATA

GAS: 22.7 $10^3 m^3/d$
OIL: m^3/d
SIP: 2813 kPa
FORM: Cambrian
INTRVL: 876.6 m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
128.9 –	Show	NA
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
–		
–		
–		
–		
–		
–		

PERF ☐ OPEN HOLE ☒

REMARKS

Numerous missing samples - formation top picks may be inaccurate.
* not picked

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
12.2 – 23.8	NA	FRE
27.7 – 46.9	Flowing	FRE
74.7 – 76.7	NA	FRE
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			

GEOLOGICAL CONTACTS

		TOP	ELEV	THICK
	KB ~~/LAKE LEVEL~~	0.0		
	DRIFT ~~/LAKE BOTTOM~~	2.0		
DEVONIAN	PORT LAMBTON			
	KETTLE POINT			
	HAMILTON			
	MARCELLUS			
	DUNDEE			
	COLUMBUS			
	LUCAS			
	AMHERSTBURG			
	SYLVANIA			
	BOIS BLANC			
	SPRINGVALE			
	ORISKANY			
SILURIAN	BASS ISLANDS	9.8		
	G SHALE	39.6		
	F SHALE	43.0		
	F SALT			
	E CARBONATE	82.0		
	D SALT/EQUIVALENT			
	C SHALE	*		
	B MARKER	*		
	B EQUIVALENT	*		
	B SALT			
	B ANHYDRITE	134.1		
	A2 CARBONATE	137.2		
	A2 SALT			

	A2 ANHYDRITE			
	A1 CARBONATE			
	A1 SALT			
	A1 ANHYDRITE			
SILURIAN	GUELPH	146.3		
	ERAMOSA			
	GOAT ISLAND			
	GASPORT/MARTON			
	DECEW			
	ROCHESTER	250.0		
	IRONDEQUOIT			
	REYNALES/FOSSIL HILL	268.2		
	THOROLD			
	GRIMSBY			
	CABOT HEAD	270.0		
	MANITOULIN	290.0		
	WHIRLPOOL			
ORDOVICIAN	QUEENSTON	298.0		
	BLUE MOUNTAIN - GEORG BAY	443.5		
	COLLINGWOOD			
	COBOURG	655.0		
	VERULAM	*		
	KIRKFIELD	*		
	COBOCONK	*		
	GULL RIVER	*		
	SHADOW LAKE	870.5		
	CAMBRIAN	874.5		
	PRECAMBRIAN			

GEOLOGY BY: T.R.Carter

T.R. Carter

CTY Prince Edward TWP Athol BLK TRAC LOT 2 CON V SSEL

WELL NAME OGS 88-02 PERMIT 7257 INIT CLASS STR

OPERATOR Ontario Geological Survey TARGET ORD CUR STATUS STR-ABD

DRILLING DATA

CONTRACTOR Groundation Engineering
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV NA
BOT LOGGER
ROTRY TOP 0.0 DRILLER 4.1
BOT 4.1 DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-03-24
SPUD 1988-04-07
COMPTD 1988-04-07
OFFCNF 1988-05-07
WRKOVR
ABNDND 1988-04-07

COORDINATES

NORTH 299.0 m
SOUTH m
EAST m
WEST 117.0 m
LAT 43 52 34
LONG 77 05 46

SAMPLES

TOP
BOT
TRAY

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
NW	NA	4.1	HAN	4.1

COMPLETION DATA

GAS $10^3m^3/d$
OIL m^3/d
SIP kPa
FORM
INTRVL m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
–		
–		
–		
–		
–		
–		

PERF ☐ OPEN HOLE ☐

REMARKS

No samples - operator picks only.

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
0.0 – 4.1	MNDM-TWEED		
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / LAKE LEVEL	0.0		
DRIFT / LAKE BOTTOM	0.0		
DEVONIAN: PORT LAMBTON			
KETTLE POINT			
HAMILTON			
MARCELLUS			
DUNDEE			
COLUMBUS			
LUCAS			
AMHERSTBURG			
SYLVANIA			
BOIS BLANC			
SPRINGVALE			
ORISKANY			
SILURIAN: BASS ISLANDS			
G SHALE			
F SHALE			
F SALT			
E CARBONATE			
D SALT/EQUIVALENT			
C SHALE			
B MARKER			
B EQUIVALENT			
B SALT			
B ANHYDRITE			
A2 CARBONATE			
A2 SALT			

SILURIAN: A2 ANHYDRITE			
A1 CARBONATE			
A1 SALT			
A1 ANHYDRITE			
GUELPH			
ERAMOSA			
GOAT ISLAND			
GASPORT/WIARTON			
DECEW			
ROCHESTER			
IRONDEQUOIT			
REYNALES/FOSSIL HILL			
THOROLD			
GRIMSBY			
CABOT HEAD			
MANITOULIN			
WHIRLPOOL			
ORDOVICIAN: QUEENSTON			
BLUE MOUNTAIN - GEORG BAY			
COLLINGWOOD			
COBOURG	0.0		
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: Operator

CTY Prince Edward TWP Athol BLK TRAC LOT 2 CON V SSEL

WELL NAME OGS 88-01 PERMIT 7256 INIT CLASS STR

OPERATOR Ontario Geological Survey TARGET ORD CUR STATUS STR-ABD

DRILLING DATA

CONTRACTOR Groundation Engineering
RIG TYPE Rotary DEPTHS
CABLE TOP KB ELEV NA
BOT LOGGER
ROTRY TOP NA DRILLER 59.4
BOT 59.4 DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-03-24
SPUD 1988-04-01
COMPTD 1988-04-05
OFFCNF 1988-05-05
WRKOVR
ABNDND 1988-04-05

COORDINATES

NORTH 256.0 m
SOUTH m
EAST m
WEST 83.8 m
LAT 43 52 31
LONG 77 05 41

SAMPLES

TOP
BOT
TRAY

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
–		
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
NW	NA	1.2	HAN	1.2

COMPLETION DATA

GAS $10^3m^3/d$
OIL m^3/d
SIP kPa
FORM
INTRVL m
m
m

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
–		
–		
–		
–		
–		
–		

PERF ☐ OPEN HOLE ☐

REMARKS

No samples - operator picks only.
Borehole is inclined 19° from vertical, plunging at 023°.

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
–		
–		
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
0.0 – 59.4	MNDM-TWEED		
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / LAKE LEVEL	0.0		
DRIFT / LAKE BOTTOM	0.0		
DEVONIAN: PORT LAMBTON			
KETTLE POINT			
HAMILTON			
MARCELLUS			
DUNDEE			
COLUMBUS			
LUCAS			
AMHERSTBURG			
SYLVANIA			
BOIS BLANC			
SPRINGVALE			
ORISKANY			
SILURIAN: BASS ISLANDS			
G SHALE			
F SHALE			
F SALT			
E CARBONATE			
D SALT/EQUIVALENT			
C SHALE			
B MARKER			
B EQUIVALENT			
B SALT			
B ANHYDRITE			
A2 CARBONATE			
A2 SALT			

SILURIAN: A2 ANHYDRITE			
A1 CARBONATE			
A1 SALT			
A1 ANHYDRITE			
GUELPH			
ERAMOSA			
GOAT ISLAND			
GASPORT/WIARTON			
DECEW			
ROCHESTER			
IRONDEQUOIT			
REYNALES/FOSSIL HILL			
THOROLD			
GRIMSBY			
CABOT HEAD			
MANITOULIN			
WHIRLPOOL			
ORDOVICIAN: QUEENSTON			
BLUE MOUNTAIN - GEORG BAY			
COLLINGWOOD			
COBOURG	0.6		
VERULAM	16.8		
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: Operator

CTY Welland TWP Wainfleet BLK TRAC 6 LOT 17 CON III

WELL NAME Champlain Wainfleet 6-17-III PERMIT 7407 INIT CLASS NEW

OPERATOR Mens and Elizabeth Itten TARGET CLI CUR STATUS GP

DRILLING DATA

CONTRACTOR Murray Rose Drilling
RIG TYPE Cable DEPTHS
CABLE TOP 0.6 KB ELEV 176.8
BOT 233.2 LOGGER
ROTRY TOP DRILLER 233.2
BOT DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-09-27
BPUD 1988-09-27
COMPTD 1988-10-28
OFFCNF 1989-10-28
WRKOVR
ABNOND

COORDINATES

NORTH 612.7 m
SOUTH m
EAST 139.5 m
WEST m
LAT 42 54 52.5
LONG 79 22 00

SAMPLES

TOP 45.7
BOT 233.5
TRAY 5139

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
199.6 – 201.2	Show	1723.7
–		
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
219	35.7	47.2	SHO	0
114	14.1	173.1	CEM	0

COMPLETION DATA

GAS 1.7 10³m³/d
OIL m³/d
SIP 1723.7 kPa
FORM Grimsby
INTRVL 199.6 m
m
m
PERF ☐ OPEN HOLE ☐

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
–		
–		
–		
–		
–		
–		

REMARKS

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
48.8 –	6.1	FRE
115.8 –	6.1	SUL
–		
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	m
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / LAKE LEVEL	0.0		
DRIFT / LAKE BOTTOM	0.6		
PORT LAMBTON			
KETTLE POINT			
HAMILTON			
MARCELLUS			
DUNDEE			
COLUMBUS			
LUCAS			
AMHERSTBURG			
SYLVANIA			
BOIS BLANC			
SPRINGVALE			
ORISKANY			
BASS ISLANDS			
G SHALE			
F SHALE			
F SALT			
E CARBONATE	47.2		
D SALT/EQUIVALENT			
C SHALE	60.8		
B MARKER			
B EQUIVALENT	70.8		
B SALT			
B ANHYDRITE	80.5		
A2 CARBONATE	87.8		
A2 SALT			
A2 ANHYDRITE			
A1 CARBONATE	98.2		
A1 SALT			
A1 ANHYDRITE			
GUELPH	99.5		
ERAMOSA			
GOAT ISLAND			
GASPORT/MARTON			
DECEW	163.1		
ROCHESTER	171.4		
IRONDEQUOIT	187.3		
REYNALES/FOSSIL HILL	188.8		
THOROLD	194.2		
GRIMSBY	197.8		
CABOT HEAD	212.8		
MANITOULIN			
WHIRLPOOL	226.0		
QUEENSTON	228.9		
BLUE MOUNTAIN - GEORG BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

CTY Welland TWP Wainfleet BLK TRAC 5 LOT 32 CON III

WELL NAME Dibe 1 Wainfleet 5-32-III PERMIT 7247 INIT CLASS DEV

OPERATOR Fred Dibe TARGET CLI CUR STATUS GP

DRILLING DATA

CONTRACTOR Bob Elfner/Fred Dibe
RIG TYPE NA DEPTHS
CABLE TOP KB ELEV 177.78
BOT LOGGER
ROTRY TOP DRILLER 211.8
BOT DEEP END
DRLG FLD PLUG BK

DATES

PERMIT 1988-03-01
BPUD 1988- NA
COMPTD 1988-04-15
OFFCNF 1988-05-15
WRKOVR
ABNOND

COORDINATES

NORTH 865.3 m
SOUTH m
EAST m
WEST 200.9 m
LAT 42 54 55
LONG 79 26 32.5

SAMPLES

TOP 39.6
BOT 210.3
TRAY 5529

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
182.9 –	Show	NA
189.0 –	Show	NA
196.6 –	.1	NA
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
177.8	25.3	39.0	SHO	0
114.3	4.1	167.6	BHP	0

COMPLETION DATA

GAS 0.1 10³m³/d
OIL m³/d
SIP 489.5 kPa
FORM Thorold, Grimsby
INTRVL 182.9-196.6 m
m
m
PERF ☐ OPEN HOLE ☑

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
–		
–		
–		
–		
–		
–		

REMARKS

Poor samples above 90m.
Picks unreliable

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
15.2 –	NA	FRE
61.1 –	NA	FRE
80.8 –	4.9	SUL
118.9 –	4.9	SUL
131.1 –	4.9	SUL
–		

CORING RECORD

INTERVAL	LOCATION	NO	m
–			
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / LAKE LEVEL			
DRIFT / LAKE BOTTOM			
PORT LAMBTON			
KETTLE POINT			
HAMILTON			
MARCELLUS			
DUNDEE			
COLUMBUS			
LUCAS			
AMHERSTBURG			
SYLVANIA			
BOIS BLANC			
SPRINGVALE			
ORISKANY			
BASS ISLANDS			
G SHALE			
F SHALE			
F SALT			
E CARBONATE	39.0		
D SALT/EQUIVALENT			
C SHALE			
B MARKER			
B EQUIVALENT			
B SALT			
B ANHYDRITE			
A2 CARBONATE			
A2 SALT			
A2 ANHYDRITE			
A1 CARBONATE	84.0		
A1 SALT			
A1 ANHYDRITE			
GUELPH	90.8		
ERAMOSA			
GOAT ISLAND			
GASPORT/MARTON			
DECEW	155.5		
ROCHESTER	163.0		
IRONDEQUOIT	180.0		
REYNALES/FOSSIL HILL	182.9		
THOROLD	185.0		
GRIMSBY	189.0		
CABOT HEAD	201.2		
MANITOULIN			
WHIRLPOOL			
QUEENSTON			
BLUE MOUNTAIN - GEORG BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY: T.R. Carter

T.R. Carter

CTY Wentworth TWP Binbrook BLK TRAC 8 LOT 1 CON V

WELL NAME Mary Ellen Binbrook 8-1-V PERMIT 7384 INIT CLASS NPW

OPERATOR Wayne Hamilton TARGET CLT CUR STATUS GP

DRILLING DATA

CONTRACTOR Elgin Mitchell

RIG TYPE Rotary DEPTHS

CABLE TOP KB ELEV 218.8

BOT LOGGER

ROTRY TOP 1.0 DRILLER 121.9

BOT 121.9 DEEP END

DRLG FLD PLUG BK

DATES

PERMIT 1988-08-23

SPUD 1988-09-21

COMPTD 1988-09-27

OFFCNF 1989-09-27

WRKOVR

ABNDND

COORDINATES

NORTH 106.7 m

SOUTH m

EAST m

WEST 170.7 m

LAT 43 09 48

LONG 79 56 34

SAMPLES

TOP 20.1

BOT 121.9

TRAY 4240

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
96.0 –	0.2	NA
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
219	35.7	25.0	SHO	0
114	14.1	94.2	HWP	0

COMPLETION DATA

GAS 0.2 10³m³/d

OIL m³/d

SIP NA kPa

FORM Irondequoit

INTRVL 96.0 m

m

m

PERF ☐ OPEN HOLE ☑

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
–		
–		
–		
–		
–		

REMARKS

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
23.2 –	NA	FRE
44.2 –	NA	BLK
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / LAKE LEVEL	0.0		
DRIFT / LAKE BOTTOM	1.0		
DEVONIAN: PORT LAMBTON			
KETTLE POINT			
HAMILTON			
MARCELLUS			
DUNDEE			
COLUMBUS			
LUCAS			
AMHERSTBURG			
SYLVANIA			
BOIS BLANC			
SPRINGVALE			
ORISKANY			
SILURIAN: BASS ISLANDS			
G SHALE			
F SHALE			
F SALT			
E CARBONATE			
D SALT/EQUIVALENT			
C SHALE			
B MARKER			
B EQUIVALENT			
B SALT			
B ANHYDRITE			
A2 CARBONATE			
A2 SALT			
SILURIAN: A2 ANHYDRITE			
A1 CARBONATE			
A1 SALT			
A1 ANHYDRITE			
GUELPH	20.1		
ERAMOSA			
GOAT ISLAND			
GASPORT/WARTON			
DECEW			
ROCHESTER	83.0		
IRONDEQUOIT	95.0		
REYNALES/FOSSIL HILL	97.5		
THOROLD	98.5		
GRIMSBY	100.6		
CABOT HEAD	109.7		
MANITOULIN			
WHIRLPOOL			
ORDOVICIAN: QUEENSTON			
BLUE MOUNTAIN - GEORG BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY T.R. Carter

CTY Wentworth TWP Glanford BLK TRAC 2 LOT 15 CON V

WELL NAME Reid 1 Glanford 2-15-V PERMIT 7408 INIT CLASS NPW

OPERATOR Michael Vandarzanden TARGET CLT CUR STATUS GP

DRILLING DATA

CONTRACTOR Elgin Mitchell

RIG TYPE Rotary DEPTHS

CABLE TOP KB ELEV 219.9

BOT LOGGER

ROTRY TOP 1.0 DRILLER 137.2

BOT 137.2 DEEP END

DRLG FLD PLUG BK

DATES

PERMIT 1988-10-04

SPUD 1988-09-28

COMPTD 1988-10-12

OFFCNF 1989-10-12

WRKOVR

ABNDND

COORDINATES

NORTH m

SOUTH 134.4 m

EAST 132.6 m

WEST m

LAT 43 08 24

LONG 79 51 07.5

SAMPLES

TOP 18.3

BOT 137.2

TRAY 6791

INITIAL GAS RECORD

INTERVAL	FLOW	SIP
93.0 –	Show	NA
126.8 –	0.15	827.4
–		
–		
–		
–		

CASING AND TUBING RECORD

DIAM	WEIGHT	SET AT	HOW SET	RECOV
177.8	29.8	27.4	BAR	0
114.3	14.1	79.2	BHP	0

COMPLETION DATA

GAS 0.15 10³m³/d

OIL m³/d

SIP 827.4 kPa

FORM Whirlpool

INTRVL 126.2-128.3 m

m

m

PERF ☐ OPEN HOLE ☑

INITIAL OIL RECORD

INTERVAL	FLOW	DENSITY
–		
–		
–		
–		
–		

LOGGING RECORD

INTERVAL	TYPE	COMPANY
–		
–		
–		
–		
–		

REMARKS

Samples mixed up, picks uncertain

INITIAL WATER RECORD

INTERVAL	STAT LEV	TYPE
21.3 –	NA	FRE
25.0 –	NA	FRE
73.2 –	NA	SUL
–		
–		
–		

CORING RECORD

INTERVAL	LOCATION	NO	mm
–			
–			
–			
–			

GEOLOGICAL CONTACTS	TOP	ELEV	THICK
KB / LAKE LEVEL	0.0		
DRIFT / LAKE BOTTOM	1.0		
DEVONIAN: PORT LAMBTON			
KETTLE POINT			
HAMILTON			
MARCELLUS			
DUNDEE			
COLUMBUS			
LUCAS			
AMHERSTBURG			
SYLVANIA			
BOIS BLANC			
SPRINGVALE			
ORISKANY			
SILURIAN: BASS ISLANDS			
G SHALE			
F SHALE			
F SALT			
E CARBONATE			
D SALT/EQUIVALENT			
C SHALE			
B MARKER			
B EQUIVALENT			
B SALT			
B ANHYDRITE			
A2 CARBONATE			
A2 SALT			
SILURIAN: A2 ANHYDRITE			
A1 CARBONATE			
A1 SALT			
A1 ANHYDRITE			
GUELPH	18.3		
ERAMOSA			
GOAT ISLAND			
GASPORT/WARTON			
DECEW			
ROCHESTER	85.4		
IRONDEQUOIT	*		
REYNALES/FOSSIL HILL	92.7*		
THOROLD	*		
GRIMSBY	94.5*		
CABOT HEAD	103.6*		
MANITOULIN			
WHIRLPOOL	126.2		
ORDOVICIAN: QUEENSTON	128.3		
BLUE MOUNTAIN - GEORG BAY			
COLLINGWOOD			
COBOURG			
VERULAM			
KIRKFIELD			
COBOCONK			
GULL RIVER			
SHADOW LAKE			
CAMBRIAN			
PRECAMBRIAN			

GEOLOGY BY T.R. Carter